# INVESTIGATION REPORT

## MANAGEMENT OF CONSTRUCTION PROJECTS BY THE HOUSING AUTHORITY AND THE HOUSING DEPARTMENT

March 2002

Office of The Ombudsman

Hong Kong

## MANAGEMENT OF CONSTRUCTION PROJECTS BY THE HOUSING AUTHORITY AND THE HOUSING DEPARTMENT

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LEGEND OF ABBREVIATIONS

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# 1

# *INTRODUCTION*

**BACKGROUND**

**1.1** Problems revealed in late 1999 in a number of public housing projects gave rise to serious community concern. The Ombudsman decided in the public interest to initiate a direct investigation, under section 7 (1)(a)(ii) of The Ombudsman Ordinance, Cap. 397, into the overall administrative aspects of the Hong Kong Housing Authority (HA) and the Housing Department (HD) in the management of their construction projects. In late May 2000, HA and HD were notified of The Ombudsman's decision and they offered full assistance. A press announcement was issued on 31 May 2000.

**PURPOSE AND AMBIT**

**1.2** This direct investigation examines the actions of HA and HD in the execution of their administrative functions in relation to the following matters -

(a) their respective roles and responsibilities and their actual involvement in construction projects;

(b) the system of project planning and management, in particular the supervisory control mechanism and practices, and their comparison with

industry norms;

(c) the initiatives and remedial measures by HA/HD in tackling the problems identified; and

(d) areas for further improvement.

**METHODOLOGY**

**1.3** For this investigation, we have -

(a) studied relevant papers, records, reports, manuals and statistical data of HA/HD;

(b) interviewed representative members of HA, HD and Housing Bureau (HB);

(c) visited a number of HA/HD construction sites and discussed with consultants and HD professional and technical staff working on these projects;

(d) studied cases and taken reference from the investigation panel on a number of public housing projects; and

(e) invited views from HD staff and their associations/unions and members of the public.

**1.4** On the systems and practices in project planning and

management in HA/HD and in the private sector, it became apparent in the course of investigation that comprehensive study and detailed comparison would not be appropriate for the following reasons -

(a) HA is a statutory body operating on public funds and enjoys a near monopoly[1] in the development of public housing. The public has a right to higher expectations on its performance;

(b) Unlike the clientele of private housing, HA mainly serves people with lower income and little choice in meeting their housing needs; and

(c) The Construction Industry Review Committee (CIRC), set up in April 2000 to examine the local construction industry, has made 109 recommendations for improvement and reported fully in January 2001.

Nevertheless, in Chapters 3 and 4 of this report, we do bring out the similarities and differences in HA/HD and private sector systems and practices.

**REPORT**

**1.5** The draft investigation report was sent to HA, HD and HB for comments on 28 September 2001 and then to Planning

[1] The Hong Kong Housing Society, the other developer in public housing, produces far fewer flats than HA.

and Lands Bureau, Works Bureau, Buildings Department and the Hong Kong Housing Society for comments on 21 December 2001. This final investigation report, incorporating the comments from the parties mentioned above, was issued on 5 March 2002.

# 2

# ROLES, RESPONSIBILITIES, STRUCTURE AND OPERATION OF HOUSING AUTHORITY/HOUSING DEPARTMENT AND RELEVANT ORGANISATIONS

## PUBLIC HOUSING POLICY

**2.1** The fire at Shek Kip Mei squatter area on Christmas Day of 1953 marked the beginning of public housing in Hong Kong. The following year saw the setting up of the Resettlement Department and the building of resettlement estates to accommodate the fire victims. To redress the serious housing problem, Government decided in 1954 to set up a semi-independent HA to build low-cost housing estates to improve the living condition of those with low income. The Housing Section of the then Urban Services Department was responsible for implementing the low-cost housing programme. In October 1972, Government announced a ten-year programme to provide public rental housing flats for 1.8 million people. For more effective implementation, a new HA was set up by law in April 1973. At the same time, the Resettlement Department and the Housing Section of the then Urban Services Department were amalgamated to form the Housing Department to be the executive arm of HA.

**2.2** In the 1970s, as a result of the steady economic growth over the past decades, many Hong Kong citizens began

to make a better living and to accumulate savings. Their income exceeded the prescribed limit for renting public housing flats but was not high enough for buying private flats. As a result, many had to rent a flat at ever-increasing cost. On the other hand, the financial situation of many tenants of public housing estates had improved over the years. To improve the living condition of such tenants and to make available more rental flats for needy families, HA launched the Home Ownership Scheme (HOS) in 1978. No income limit was imposed on public housing tenants but they were required to surrender their rental flats for reallocation. Other applicants were subject to a stipulated income limit to ensure that they were genuinely in need.

**2.3** In 1987, Government promulgated the first Long Term Housing Strategy (LTHS), in which it pledged to build about 560,000 public housing flats over 14 years from April 1987 to March 2001. In other words, an average of 40,000 public housing flats would be built each year during that period. In April 1988, the Housing Branch was abolished. HA was re-organised and given the responsibility to keep the 1987 LTHS under review.

**2.4** In October 1994, based on HA's information, Government pledged to provide 289,000 public housing flats during a six-year period from April 1995 to March 2001. This target represented on average nearly 50,000 flats each year. This target was repeated in the 1995 and 1996 Policy Addresses, with a modest increase of 3,000 HOS flats in 1995 to reflect a minor change in HA production schedule. The Housing Branch was re-established in November 1994 and was renamed the Housing Bureau in July 1997.

**2.5** In February 1998, Government published a White Paper

on the second LTHS, setting out its housing policy and targets for the years ahead. The White Paper states that Government's main objectives are "to help all households gain access to adequate and affordable housing, and to encourage home ownership in the community". Key targets, updated in 2000 to take into account changes in circumstances, are -

(a) to provide 50,000 housing assistance opportunities annually in the public sector;

(b) to achieve a home ownership rate of 70% by 2007; and

(c) to reduce the average waiting time for public rental housing to three years by 2003.

**2.6** To meet these targets, Government has adopted a series of measures, which included drawing up a long-term 13-year programme for flat production and putting in place a mechanism for monitoring progress and solving problems (para. 2.37).

## HOUSING AUTHORITY

### Roles and Responsibilities

**2.7** HA is a statutory body established in April 1973 under the Housing Ordinance, Cap. 283. Evolving over the years, HA has been re-organised into its present structure since April 1988, with financial autonomy under a non-official Chairman

and a largely non-official membership.

**2.8** The Authority is responsible for implementing the local public housing programme within the objectives of LTHS. It also advises the Chief Executive (CE) on all matters related to public housing. The main duties of the Authority are summarised in **Annex 2-1.**

**2.9** HA is the largest rental housing provider and property developer in Hong Kong. According to its 2000/2001 Annual Report, HA has built 653,000 rental flats and 300,000 home ownership units, providing homes for half of the local population.

**Composition**

**2.10** HA consists of four official and 28 non-official members. All non-official members are appointed by CE for fixed terms. The four official members are the Director of Housing (D of H), the Secretary of Housing (S for H), the Secretary for the Treasury (S for Try) and the Director of Lands (D of L).

**Committee Structure**

**2.11** The Authority has eight standing committees dealing with different aspects of the full spectrum of public housing issues. These range from strategic planning, building, rental housing, home ownership, commercial properties, human resources, finance and complaints. When necessary, ad hoc committees are set up to look at specific matters. HA's committee structure is at **Annex 2-2.**

**2.12** The standing committees have delegated authority to

deal with the areas of work specified in their terms of reference. Generally speaking, except for such overall and major policy issues as formulation of business plans, standing committees do not need to submit decisions made and documents endorsed to the Authority for approval or ratification.

**Modus Operandi**

**2.13** Policy-related issues are presented in the form of papers for discussion and endorsement either by the full HA or the relevant standing committee(s) for implementation by HD. The Chairman, HA (CHA) meets weekly with D of H, Deputy Directors of Housing, the four Business Directors, Director/ Corporate Services and the Finance Director to consider and endorse policy papers before submission.

**Building Committee**

**2.14** The Building Committee (BC), in particular, plays a pivotal role in shaping HA policies and actions on construction-related matters. Its terms of reference are detailed in **Annex 2-3**. In brief, BC advises HA on the most efficient and cost-effective means of implementing and monitoring the construction and major improvement and renovation programmes. It scrutinizes and endorses annual business plans as well as financial targets, service standards and performance measures drawn up by the Development and Construction Branch of HD for submission to the Authority for approval. Under delegated authority from HA, it approves the briefs, plans and designs for public housing and related projects, the appointment of consultants and contractors for works and services. It acts as the Authority's Tender Board in considering and approving tenders for projects and services. It also acts as the Disciplinary Board for defaulting

consultants and contractors.

**2.15** BC consists of three official and 12 non-official members, with a non-official member serving as Chairman. The official members are D of H, the Deputy Director of Housing (Works) and the Secretary for Works (S for W) or his representative. HB is not represented because the matters discussed at BC are mainly technical in nature.

**2.16** BC members rely heavily on HD in the conduct of their business. Proposals and recommendations presented by HD for discussion or comments are seldom rejected. According to HA records in 2000/2001, BC rejected HD's recommendations in four cases out of a total of 55 tender papers and required resubmission in one out of 12 Master Layout and Scheme Design proposals. In this light, HD to a large extent sets the agenda and has considerable influence over what, and how, information is presented; and thus what decisions BC makes.

**2.17** In 1999/2000, BC met 18 times and considered 258 papers: including 162 for discussion, 44 information and 55 presumption. In 2000/2001, BC met 20 times and considered 200 papers: 101 for discussion, 45 information and 54 presumption.

## HOUSING DEPARTMENT

### Roles and Responsibilities

**2.18** HD, headed by D of H, is the executive arm responsible for implementing HA policies and carries a portfolio that includes public rental housing estates, HOS estates, cottage areas, interim housing, transit centres, flatted factories and extensive commercial facilities within HA housing estates. It

plans and builds public housing, for rent or sale. It manages rental housing estates and some HOS estates. It also administers the Private Sector Participation Scheme (PSPS) on behalf of Government and offers loans under the Home Purchase Loan Scheme. Additionally, it acts as Government's agent in clearing land, rehousing people affected by clearances, preventing and controlling squatting while making improvement to squatter areas.

**Organisation Set-up**

*Division of Work*

**2.19** HD is organised and operates along business lines which mirror the structure of HA. It has six business branches: namely Development and Construction Branch, Management Branch, Commercial Business and Development Branch, Allocation and Marketing Branch, Corporate Services Branch and Finance and Accounting Branch. There are also the Corporate Strategy Unit and the Director's Office which report directly to D of H. A simplified organisation chart of HD is at **Annex 2-4**. Each branch is headed by a Business Director who is responsible for developing and overseeing daily operation of his business, setting service goals and performance standards, and securing and monitoring deployment of resources within his branch.

*Executive Board*

**2.20** The Business Directors report to their respective HA committees through an Executive Board chaired by D of H. The Executive Board discusses and sets overall strategies, clears draft policy papers prior to submission to HA and its committees and monitors business performance.

*Staffing*

**2.21** Under section 6A of the Housing Ordinance, HA may employ its own staff on such terms and conditions as it may determine. In practice, HD is staffed mostly by civil servants whose appointment, pay and conditions of service, conduct and discipline are governed by civil service regulations. Only a small percentage of HD staff is employed on HA contract terms. As at 31 March 2001, HA had 12,724 (91%) civil service posts and 1,278 (9%) HA posts. A more detailed breakdown is at **Annex 2-5**.

**2.22** D of H is the Chief Executive Officer, as well as Deputy Chairman, of HA. This post has traditionally been held by a career civil servant. D of H reports to CHA except on matters concerning squatter control and clearance, for which he reports directly to HB. In personnel management terms, CHA appraises the performance of the Director annually. Such appraisal is countersigned by S for H, who would provide general impressions of the Director's work and comment on his performance.

**2.23** During their interviews with this Office, some HA members have expressed the view that, in the longer term, it would be more sensible for HA to exercise the power to hire and fire its own staff rather than rely on the civil service for the necessary manpower.

**Operation**

**2.24** All key activities connected with implementing construction projects are carried out by Development and Construction Branch (D&CB).

*Development and Construction Branch*

**2.25** Headed by the Business Director/Development (BD/D), D&CB plans, develops and implements policies, strategies and legislation with regard to public housing development and construction programmes. It also sets, bids for and manages the resources required for implementation.

**2.26** Prior to 1997, new development projects were administered by the then New Development Branch. In April 1997, HD embarked on a series of organisational changes which re-structured itself along business lines. D&CB was formed to take charge of construction activities. The then D&CB consisted of two Projects Division and a Development Division.

**2.27** In preparation for an imminent sharp peak in Government's public housing production and an increased long-term target of 50,000 public housing flats a year from 1999/2000 onwards, HA commissioned a business process re-engineering study of HD's construction process in 1996. As a result, D&CB was re-organised in November 1997. On a process-oriented basis, the re-organised D&CB carried out a dedicated project management function. While the Development Division was strengthened to provide professional supporting services to the Branch, the other two Divisions had been re-organised as the Project Management and the Works Divisions. HA also decided to outsource the design and supervision of a significant portion of production.

**2.28** To further rationalise its organisation set-up, D&CB was re-structured yet again in March 1999 by transferring the professional construction service units such as civil engineering, geotechnical engineering and quantity surveying from the then Commercial and Services Branch to D&CB. The

Project Management and the Works Divisions were also re-organised into three geographical divisions, each headed by a Project Director (PD). The three PDs are responsible for the project management, contract management and consultant management of all projects in their respective geographical area, in addition to some branch-wide subjects. An Audit Unit was also set up within D&CB, charged with the responsibility of monitoring and assessing consultants and in-house project team performance in the design and construction of HA projects and improving project team performance through the identification of project-specific and general deficiencies.

**2.29** The evolution of D&CB was HA/HD's effort to expedite production and to enhance efficiency. The organisation chart of D&CB in March 1999 is at **Annex 2-6**. As at 1 March 2001, there were 19 directorate, 467 professional, 645 technical, 625 site supervisory and 259 general grades officers serving in D&CB.

## RELEVANT ORGANISATIONS

### Housing Bureau

*Roles and Responsibilities*

**2.30** HB, headed by S for H, is responsible for developing macro strategic policies on public and private housing, carrying out research and planning, co-ordinating Government activities in implementing housing policies and programmes, monitoring the implementation of LTHS and HA's policies and introducing legislation where necessary. Through co-ordination with Finance Bureau and Planning and Lands Bureau, it ensures that financial and land resources are made available

to achieve the Government policy objective of providing better housing for all.

**2.31** While S for H is an official member of the Authority, an HB official (usually a Deputy Secretary for Housing) serves on the HA's standing committees for Home Ownership, Rental Housing, Strategic Planning and Finance.

*Working Relationship between HB and HA/HD*

**2.32** HB is Government's contact point with the Legislative Council (LegCo) on housing matters. For LegCo Questions and motion debates relating to HA, S for H would reply on behalf of HA with information provided by HA/HD. HB officials, together with HD staff, attend before the LegCo Panel on Housing for discussions on HA matters. Important policy matters are submitted to the Executive Council (ExCo) for advice. For the introduction of legislative amendments affecting the work and operation of HA, HA/HD would make submissions via HB to ExCo and LegCo.

**2.33** HB explains that it is responsible for formulating macro and strategic housing policies, which include the equitable use of public housing resources and HOS. HA, on the other hand, is responsible for micro and operational policies on public housing, with HD as its executive arm. HB is not involved in ensuring the quality of public housing as this is an operational matter. In this context, S for W -- and not S for H -- serves on BC (para. 2.15).

**2.34** Apart from informal contact, S for H officially meets with CHA about once a month on public housing policy issues. At the operational level, HB officials meet with HA members and HD officials on a regular basis to discuss matters

of common interest such as targets for production, progress of policy implementation and introduction of new policy. It is the practice of HD to have prior discussions with HB on important proposals which HD intends to put to HA for consideration. These discussions facilitate constructive exchange of views to ensure that operational policies to be set by HA would be in line with Government strategic policies. HB explains that as its representative on HA and its committees has only one voice amongst many, it would be too late to voice HB opinions at meetings. In this connection, HB has been performing a monitoring, but not supervisory, role over HA and it always stands ready to offer advice and opinions to HA when required.

**2.35** With their different roles and close communication and co-operation, HB considers that it has little fundamental disagreement with HA on public housing policy issues. Any differences can normally be resolved through consensus or compromise. Where agreement cannot be reached, intervention by the Chief Secretary for Administration (CS) will be sought. HB has no power of veto over the decisions of HA. However, CE may under section 9 of the Housing Ordinance give directions, either generally or in any particular case, with respect to the exercise or performance by the Authority or a public officer of any powers, functions or duties under the Ordinance. It should be noted that this power has never been used.

*Steering Committee on Land Supply for Housing (HOUSCOM)*

**2.36** HOUSCOM, chaired by the Financial Secretary[1], is a special task force set up in 1997 to ensure land supply and examine its impact on infrastructure and housing developments.

[1] HOUSCOM is now chaired by CS

It provides a high-power forum within Government for setting priorities, deciding on competing claims and resolving problems. Membership of HOUSCOM is entirely official and includes all four official members of HA (para. 2.10).

**2.37** In October 1997, HOUSCOM devised a new accountability system. For public housing developments, D of H assumes overall responsibility for HA projects, including the PSPS, through all stages of the development process. Each project in the flat production programme becomes the personal responsibility of a nominated directorate officer as Project Manager (PM), to keep strictly to the timetable and to resolve any inter-departmental problems which may impede speedy progress of the projects under his charge. PM must escalate matters to D of H once he discovers the target production date for any of his projects is not likely to be achieved. PM reports monthly to HB. HB will alert HOUSCOM of any possibility of departure from the established yearly flat production targets and recommend remedial measures.

**Hong Kong Housing Society**

**2.38** The Hong Kong Housing Society (HKHS) is an independent, not-for-profit housing development organisation established in 1948 and incorporated under the Hong Kong Housing Society Incorporation Ordinance, Cap. 1059, in 1951. Its staff are HKHS employees. Since its establishment, HKHS has provided a total of 50,000 flats to meet the housing needs of different sectors of the community. Since the 1990's, HKHS has helped to administer Government's Sandwich Class Housing Loan Scheme and Home Starter Loan Scheme.

**2.39** In August 2000, the Society commissioned a consultancy study to improve the long-term effectiveness of

its governance structure. As a result, it strengthened its accountability and flexibility to operate as efficiently as its private sector competitors. The governance body would focus on overall supervision while the management is exclusively accountable for operations.

**2.40** In this connection, the governance structure has adopted a two-tier model and a Supervisory Board has been placed over a smaller reconstituted Executive Committee. The Board has authority and responsibility for setting the HKHS mission and guiding principles. The reconstituted Executive Committee, accountable to the Supervisory Board, sets the major policies and strategies and monitors the performance of the Management. The organisation chart of HKHS since December 2000 is at **Annex 2-7**.

**Buildings Department**

**2.41** The Buildings Department (BD) enforces the Buildings Ordinance, Cap. 123 and its subsidiary legislation and exercises control over the planning, design and construction of all **private** buildings and associated works, except New Territories Exempted Houses. A person intending to carry out building works is required to appoint an Authorized Person (AP) and, where appropriate, a Registered Structural Engineer (RSE) to design and supervise the building/structural works, and a Registered General Building Contractor (RGBC) or a Registered Specialist Contractor (RSC) to carry out the works. Such authorized or registered professionals have a statutory duty to ensure compliance with the law and to supervise works for safety and compliance with standards under the Buildings Ordinance and Regulations.

**2.42** As the Building Authority (BA), the Director of

Buildings has the power under section 16 to refuse to give approval of any plans or consent for commencement of building works. Under section 21(6), he has the power to refuse to issue occupation permit if a building does not meet all statutory requirements under the Buildings Ordinance.

**2.43** Under section 40(2A), AP/RSE/RGBC/RSC or any person directly concerned with the building works shall be liable on conviction to a fine of $250,000 and to imprisonment for three years if he permits or authorises the use of any materials which are defective or do not comply with the Ordinance, or have not been applied, used or constructed in the manner required under the Ordinance; deviates in a material way from approved plans; or knowingly misrepresents a material fact in any plans or certificates submitted to BD. He is also liable on conviction to the same penalty under section 40(2B) if he carries out works in such manner that it causes injury or a risk of injury to any person or damage to any property. Over the past ten years, BD has successfully prosecuted offenders relating to new building works in more than 40 cases.

**2.44** Apart from prosecution, BA may under section 7 institute disciplinary proceedings against an AP/RSE who has been convicted by court of an offence relating to the carrying out of his professional duties, has been negligent or has misconducted himself in a professional way. Similar disciplinary action may be taken against a RGBC/RSC under section 13. The disciplinary board has the power to order removal from the respective register permanently or for a certain period. He may also be fined a maximum of $250,000 or be reprimanded.

**2.45** However, **Government and HA** building works are exempted from the control of the Ordinance. These include

public rental housing and HOS estates. Nevertheless, HA recognises the merit of an independent third-party check. It has been in discussion with Government on the need to put its construction projects and building works under BA's control. The actions taken by HA/HD in this respect are detailed in Chapter 5.

**WORKING RELATIONSHIP BETWEEN HOUSING AUTHORITY, HOUSING DEPARTMENT, HOUSING BUREAU AND HONG KONG HOUSING SOCIETY**

**2.46** In June 2000, CE announced that CS would set up a Review Committee on Institutional Framework for Public Housing to make recommendations for improvement. This is now in session.

# 3

# *PROJECT MANAGEMENT*

## MODES OF PROJECT MANAGEMENT

**3.1** In the HD project management system, a project is created when the Strategic Planning Committee (SPC) approves an outline programme for the development of an estate for inclusion into the Pubic Housing Development Programme. Each project consists of five key stages: planning, design, tender, construction and post-construction. Projects may be undertaken **in-house** by HD staff or **outsourced** to consultants through an architect-led consultancy arrangement.

### Management of In-house Projects

**3.2** Project management in HD was mainly the responsibility of the Chief Architect (CA) before 1997. The CA assumed multiple roles: he was at the same time Design Team Leader (DTL), Contract Manager (CM) and Project Manager (PM). These were overlapping roles and made for theoretical supervision, with the officer "reporting" to himself. In 1997, HD introduced changes to the system to meet its increasing housing production targets. The D&CB was re-organised on a process-oriented basis with dedicated project management function to reduce production lead-time and to enhance accountability. The in-house project management system is outlined at **Annex 3-1**.

**3.3** The four main stages for public housing development

are site inception and acceptance, feasibility study and conceptual layout, design and tender, and construction. A flowchart on the internal procedures is at **Annex 3-2.** Other activities in project management relate to project completion and handover, maintenance, final accounts and general issues. The roles and responsibilities of the PM in these different stages and activities are detailed at **Annex 3-3**.

**Management of Outsourced Projects**

**3.4** As a matter of general policy, HA engages private consultants to supplement in-house resources in coping with the fluctuating workload in construction activities (such as foundation works) and to complement HD expertise. The outsourcing arrangements are essentially the same as those for projects outsourced by other government departments e.g. Architectural Services Department. For HA's outsourced projects, consultants are normally appointed through an architect-led consultancy arrangement, under which the lead architectural consultants are required to team up with sub-consultants from other disciplines for different services. For instance, the piling portion of a project is handled by structural engineering sub-consultant under the lead consultant. Such consultants' roles and responsibilities correspond to those of in-house staff engaged in similar work, except that HD retains the project management duties.

**3.5** In anticipation of an increase in production in 1997, HA approved new measures to deal with projects under planning or feasibility study and those scheduled for design or construction in 1998. HA's approach was to deploy HD staff for production at the "normal" level over the longer term. Problems associated with bunching of production in the shorter term should be resolved by outsourcing rather than by

recruiting more HD staff, to obviate future redundancies.

**3.6** An increasing number of projects has been outsourced to consultants since 1995/1996, with indications of bunching becoming evident. Among the outsourced projects, there were about 38,900 out of 42,100 flats (92%) in 1995/1996 and 38,800 out of 44,100 flats (88%) in 1996/1997 at the design and tendering stages respectively.

**3.7** To maintain the quality and standard of services, HD has refined its system for management of consultants. With the re-organisation of D&CB in November 1997, consultant management functions were re-aligned:

(a) a multi-disciplinary team led by a CA was set up for the overall selection, appointment and auditing of the lead consultants and sub-consultants; and

(b) another team was tasked with the day-to-day management of consultants, monitoring progress of their work, processing their fees and providing guidance on submissions to HA committees.

**3.8** By mid-1998, many of the consultant projects had proceeded to detailed design, tender documentation and commencement of works. These two teams were then merged to form the Consultant Management Section (CMS) under a CA.

**3.9** By early 1999, most of the projects were under construction. Day-to-day consultant management and performance appraisal went to PMs for better co-ordination at the construction stage. Consultant selection and appointment

went to the Technical Secretariat Unit. For the effective and efficient management of consultants, the Consultant Management Manual sets out, inter alia, procedures, practices and guidelines for listing, selection, appointment, control and monitoring. The manual is updated from time to time, having regard to the latest requirements of the HA/HD as well as experience with commissioning consultants.

**Considerations for Outsourcing**

**3.10** The strategic decisions on outsourcing for meeting fluctuating workload were taken in 1995/1996 in the face of bunching production. In 1998, as part of its implementation measures in furtherance of the strategic decision taken, HD conducted feasibility study of about 50,000 flats per year. Of these, 10,000 flats would be from PSPS and 5,000 flats from "mixed development". HD would handle the design, tendering and site supervision of the remaining annual target of 35,000 flats: this would be the basis for its staffing establishment. Any requirements above this threshold would be met by short-term measures, e.g. contract staff or outsourcing construction projects.

**3.11** Against this background, in June 1998 the BC endorsed outsourcing of 35,000 flats in 1998/1999 and 27,000 in 1999/2000. To ease the peak production, HA adopted a flexible strategy for outsourcing (Quality Housing Reform 2000) to engage consultants for the final inspection of completed flats.

**3.12** HD statistics from 1997 to 2000 indicate that outsourcing accounted for roughly a third each of the HA projects and flats in the construction stage, as follows -

| Year | Projects | | | Flats | | |
|---|---|---|---|---|---|---|
| | In-house | Consultant | Total | In-house | Consultant | Total |
| 1997 | 71 (67%) | 35 (33%) | 106 (100%) | 77,035 (68%) | 36,987 (32%) | 114,022 (100%) |
| 1998 | 92 (67%) | 45 (33%) | 137 (100%) | 110,536 (66%) | 57,354 (34%) | 167,890 (100%) |
| 1999 | 96 (68%) | 45 (32%) | 141 (100%) | 122,701 (66%) | 62,745 (34%) | 185,446 (100%) |
| 2000 | 76 (64%) | 42 (36%) | 118 (100%) | 106,808 (64%) | 59,262 (36%) | 166,070 (100%) |

[Source: HD on 21.3.2001]

**Managing In-house and Outsourcing**

**3.13** HD maintains that it exercises equal management control over HA projects, both in-house and outsourced, through the design review and vetting mechanism via the supervising Assistant Directors, BC, SPC, Project Design Review Committee and Detailed Design Review Panel.

**3.14** PMs manage all projects at the pre-SPC stage to ensure consistent planning and development control for compliance with requirements. At the post-SPC stage, in-house contract managers assume comprehensive control over the progress of projects and would alert PMs on deviations from development parameters.

**3.15** In monitoring consultant works undertaken by external contract managers, PMs provide more guidance and monitoring control at the post-SPC stage to check compliance with requirements.

**3.16** In outsourced projects, HD retains project management duties and does not assign them to consultants. Nevertheless, the lead architectural consultants are responsible to co-ordinate design input of their sub-consultants throughout the design development and construction stages.

**PROJECT MANAGEMENT CASE STUDY**

**3.17** We have undertaken study of two projects: one outsourced and the other managed in-house. For more focused study, we have paid special attention to piling contracts.

**Case XXX: Outsourced Project**

**3.18** This was a project outsourced in February 1996. The lead architectural consultant lined up consultants from other professional disciplines for services. The piling and building contracts were awarded in 1996 and 1997 respectively and administered by the consultant acting as CM.

**3.19** The HD consultant management system has been set out in the Works Group Consultant Management Manual (the Manual), with details of procedures, practices and guidelines for listing, selection, appointment, control and monitoring. In particular, the Manual provides specific guidelines on the responsibilities of different parties involved in a project, including the liaison officers of various disciplines and their section heads in managing multi-disciplinary consultancies. The Manual also lays down the requirements for the staff of the Works Group, to ensure compliance with the procedures.

**3.20** In accordance with the Manual, a Director's Representative (DR) would be appointed to assume the overall managerial and financial responsibility. He would be supported by a team of liaison officers of various disciplines at professional / senior professional levels and their section heads at chief professional level. The liaison team would work together to ensure that requirements are met by the consultant/ sub-consultants.

**3.21** In this case, the DR was assisted by liaison officers in the architectural and structural engineering streams. Similar to other consultant projects, there was also in-house support from quantity surveyors and geotechnical engineers. The Consultant Architect assumed the role of an in-house CM. In accordance with the terms of the agreement, the Consultant Architect appointed a Geotechnical Sub-Consultant and Structural Sub-Consultant.

**3.22** The performance of the piling contractor was assessed by the Structural Sub-Consultant, countersigned by the Consultant Architect and endorsed by the Chief Structural Engineer (CSE), who was head of the Liaison Senior Structural Engineer (LSSE) and the Liaison Structural Engineer (LSE).

**3.23** The performance of the Structural Sub-Consultant was assessed by the Consultant Architect, countersigned by the LSSE for recommendation to HD's Consultants Selection and Review Board (CSRB) by the DR in consultation with the CSE. In turn, the performance of the Consultant Architect was assessed by the Liaison Architect and countersigned by the Liaison Senior Architect for recommendation to the CSRB by the DR.

**Case XXX: In-House Project**

**3.24** This was an in-house project. The piling contract was awarded in early 1998 and administered by a CSE. The building contract was awarded in late 1998 and administered by a CA.

**3.25** A number of HD works manuals govern the management of in-house projects. The key ones are-

(a) Works Group Project Procedures Manual for Public Housing Development Programme;

(b) Contract and Tender Procedures Manual;

(c) Engineering Division Administration Manual;

(d) Engineering Division Site Inspection Manual;

(e) Structural Engineering Manual;

(f) Geotechnical Engineering Manual; and

(g) Quality Management System Manual.

**3.26** The PD responsible nominated a CSE to be the CM for this project. The CM, as head of the Contract Team, was assisted by a Senior Structural Engineer (SSE) as Assistant Contract Manager (ACM) and a Structural Engineer (SE) as Project Structural Engineer (PSE) and the Contract Manager's Representative (CMR). A chart showing the composition of the Contract Team is at **Annex 3-4**.

**3.27** The Contract Team was responsible for such matters as preparation of tender documents, tendering and contract administration. In particular, the CM was responsible for monitoring production, quality, progress and financial management to ensure completion in accordance with requirements. The CM was also required to oversee the contractor's works.

**3.28** The Chief Technical Officer (CTO) Unit was responsible for deployment of site supervision staff. The site team for the piling contract comprised a Project Clerk of Works, an Assistant Clerk of Works and a Works Supervisor. They were responsible to the CM for inspection of the piling works and were supervised by the district Senior Clerk of Works, who was responsible for ensuring consistency in the standard of workmanship. The performance of the site staff was assessed by the Senior Clerk of Works in consultation with the PSE.

**3.29** The PSE was responsible for reporting on the performance of the contractor. These appraisal reports were countersigned by the SSE, i.e. the ACM, and endorsed by the CSE as the CM. The performance of the contractor would also be subject to review by the Contractors' Performance Review Committee of HD.

**OTHER MONITORING AND CONTROL MECHANISMS**

**3.30** Apart from its project management system, HD has other monitoring and control mechanisms to enable the department to ensure the quality of construction projects. These included -

- **Quality Assurance (ISO 9001)** to ensure the compliance with the documented practices and procedures under the Quality Assurance System;

- **PASS** to assess building contractors' performance for considering their tendering eligibility;

- **List Management** to scrutinize and verify the quality of contractors for admission to HA lists;

- **Penalty System** to discipline defaulting contractors on administrative basis; and

- **Other Control Mechanisms** to conduct auditing and tendering control.

A description of each of these monitoring and control mechanisms is detailed at **Annex 3-5.**

**COMPARISON WITH PRIVATE SECTOR PRACTICES**

**3.31** HA construction projects differ from the practices of the private sector in two major aspects. Essentially, HA projects are exempted from the control of the Buildings Ordinance; and no APs/RSEs are assigned for the construction works. However, PSPS projects are not exempted and have to comply with the requirements of the Buildings Ordinance. APs/RSEs are, therefore, appointed to take charge of PSPS projects.

**Exemption from Buildings Ordinance**

**3.32** Under Section 18 of the Housing Ordinance, construction projects undertaken by HA shall not be subject to building control under the Buildings Ordinance. Despite such exemption, HD has indicated that it generally observes statutory standards in design and construction. For example, HD has voluntarily submitted architectural plans of standard domestic blocks to BD for comments. Works procedures and internal design guidelines have been drawn up on the basis of the Building Regulations.

**3.33** The department has explained that it sets similar, and in certain areas even higher, standards required by the Buildings Ordinance. For example, railings installed in corridors for HA projects are 1.2 metres high, compared to the standard height of 1.1 metres prescribed by the Buildings Ordinance for private sector projects. A contractor must be an RGBC or RSC under the Buildings Ordinance, as a pre-requisite to their being admitted and retained on the HA Lists. HD's project Chief Professionals have to certify the completion of building works in line with requirements of the Buildings Ordinance.

**Absence of Authorized Persons**

**3.34** In private sector building projects including PSPS developments, the Buildings Ordinance requires the appointment of AP and RSE to ensure full compliance with the law for approval and consent by the Building Authority at different specified stages. With the exemption, no APs/ RSEs are assigned for HA construction works.

**3.35** The Buildings Ordinance and Building

(Administration) Regulations stipulate statutory duties for AP/RSE/RGBC/RSC to ensure that building works are carried out in compliance with the law. In case of default, the AP/RSE/RGBC/RSC or any other persons directly responsible for the works would be personally liable to prosecution in accordance with the Buildings Ordinance. Apart from considering the disciplinary actions taken against their contractors under the relevant list management rules, HA/HD may also recommend to BD to take disciplinary actions against these contractors, who are RGBCs/RSCs, under Section 13 of the Buildings Ordinance.

# 4

# *ADMINISTRATIVE ISSUES AND OTHER CONTRIBUTING FACTORS*

**BACKGROUND**

**4.1** In September 1999, a spate of building problems in public housing projects came to light. This drew widespread community concern over the quality of public housing, especially the structural safety of the buildings involved. The four incidents were : the uneven foundation settlement in Tin Shui Wai, piling problems in Shatin, the use of substandard reinforcement bars in the construction site at Tung Chung and the use of substandard construction materials in the redevelopment project at Shek Yam.

**Incident One**

**4.2** The project, located in Tin Shui Wai, comprised six 41-storey residential blocks, one standard primary school and one standard secondary school. Piling works lasted about ten months, from 12 September 1996 to 6 July 1997. Building construction commenced on 7 July 1997.

**4.3** The problem of uneven settlement surfaced when HD required the Consultant Architect to provide data for a comprehensive settlement monitoring exercise initiated by HA

in 1999 for all its construction sites. This was further highlighted when problems were encountered with the installation of lifts for one of the buildings. Consequently, HA appointed an independent consultancy firm to investigate the foundation for causes of the uneven settlement and to recommend remedial measures. The firm advised that the recorded length of some of the piles did not satisfy one of the acceptance criteria. Results of settlement monitoring indicated that foundation strengthening works were required to Blocks 1 and 2 whilst there was no problem with the structural adequacy of the remaining four blocks.

**Incident Two**

**4.4** The project, located in Shatin, comprised five residential blocks (two 41-storey blocks and three 33-storey) and one building for carpark and ancillary facilities. Piling works lasted about ten months, from 10 February to 19 December 1998. Building construction commenced on 21 December 1998.

**4.5** During the same HA comprehensive settlement monitoring exercise cited in para. 4.3 above, problems were discovered at the two 41-storey blocks, viz. Blocks D and E. HA appointed an independent consultancy firm to investigate. In January 2000, the firm concluded that of the 18 piles in each of the two blocks in question, only three piles at Block D and one pile at Block E complied with contract specifications. In view of the gravity of the short-piling problems identified, HA immediately suspended construction, by then completed up to the $34^{th}$ floor. In March 2000, HA decided to demolish the two defective blocks on safety grounds.

**Incident Three**

**4.6** In early 1999, through laboratory testing and the quality control system HD detected that certain batches of reinforcement delivered to site were non-compliant and had to be rejected and removed from site. HD conducted open-up inspections of concrete structure and structural safety testing. The result indicated no problem of structural safety. A consultant echoed HD's investigation findings in its report to HD.

**Incident Four**

**4.7** The use of non-conforming construction materials in the redevelopment project at Shek Yam was first discovered in the course of HD site audits in March 1998. Subsequent investigations by the architect-led consultant and HD revealed problems involving the use of substandard claddings, use of semi-dry cement sand floor screeding, substandard concreting, formwork and steel reinforcement fixing. As the substandard works were minor, the independent Structural Integrity Assessment commissioned by HD confirmed that the buildings involved were structurally safe. All substandard works were rectified by the contractor before completion of the works.

**INVESTIGATION PANELS**

**4.8** Arising from Incidents One and Two, three panels were set up -

(a) to investigate into the causes of uneven foundation settlement in Tin Shui Wai (Incident One);

(b) to investigate into the reasons for piling problems in Shatin (Incident Two); and

(c) to investigate into staff discipline aspects of both incidents.

**4.9** In June 2000, the Administration set up a Review Committee on the Institutional Framework for Public Housing (para.2.46). In February 2001, LegCo set up a Select Committee to investigate into the construction problems at four HA sites, including the construction works in public housing estates in Tung Chung, Kwai Chung, Tin Shui Wai and Shatin. Both Committees are in session.

**ADMINISTRATIVE ISSUES**

**4.10** HA/HD project management arrangements may have worked well in times of well-regulated production. In the 1990's, however, the system seems to have thrown up problems hitherto not evident. Of the four incidents cited in paragraphs 4.2 to 4.7, this Office will focus only on Incidents One and Two as the other two posed no structural safety problems. These two projects are the subject of our study as **Case XXX**

(outsourced) and **Case XXX** (in-house).

**4.11** From our study, we have identified a range of administrative issues within the operating systems and working environment of HA/HD making for problems in project management as follows:

**Focus on Paper Work**

**4.12** HD has voluminous procedural manuals and guidelines on the planning and construction of projects. Some examples have been mentioned at paragraph 3.25. Suffice it to say that these run into 34 volumes. It should also be noted that the manuals have been written only in English. Some consultants and contractors without previous experience with HA projects held the view that it could take more than six months to familiarize themselves with those manuals and procedures. HD has also observed that consultants and contractors attached great importance and devoted much time and resources to documentation and paper work to avoid blame for non-compliance.

**4.13** There is much evidence that greater emphasis was placed on documentation than on substance generally. This was corroborated by the fact that staff directly responsible for the construction projects spent most of their time at their desks in HD Headquarters, at the expense of time for site inspection and supervision.

**Insufficient Site Inspection**

**4.14** In Case XXX, site inspections were inadequate and the foundation problems were associated with inadequate supervision by the Structural Sub-Consultant, the Geotechnical Sub-Consultant and the Consultant Architect over the contractor's designs and piling works.

**4.15** A senior HD official working on the project admitted that he was not sure about the requirement of the Manual (para. 3.19) expressly for the LSSE to check the design calculations. He was also not conversant with the duties of his liaison officers and did not fully understand the purpose of the liaison team system. A SSE admitted his oversight on the need to comply with the Manual. He revealed that the SE of the liaison team adhered mainly to the Structural Engineering Manual ES7, and not the Manual.

**Inexperience of Staff**

**4.16** HD relied on contractor's superintendence on building sites and its own staff for surveillance and inspection duties on contractor's performance. Whilst established on a common grade, HD site staff possess differing degrees of experience in multifarious construction activities of public housing development. In Case XXX, HD's CTO Unit was responsible for providing, and appraising the performance of, the site inspection staff. However, the site staff had little, if any, experience or training in supervising the installation of LDBP. They were expected to act on HD's works manuals or to turn to the Project Engineer (PE), a Structural Engineer,

for guidance or interpretation of the manuals.

**4.17** In Case XXX, HD site inspection staff signed certificates and forms certifying works without proper inspection and they were subsequently found to be defective. These staff must, or should, have been aware of incidents and conditions material to the progress and quality of the works but they did not report them to the PE. The staff should have performed overtime work to monitor the concreting process or taken steps to stop works after office hours in accordance with the requirements of the Environmental Protection Department (EPD)[1]. It should have been obvious, given due diligence, that some works had been carried out in the evening. However, the site inspection staff consistently left the construction site before 7 p.m. when much of the defective work was executed (para. 7.32).

**4.18** In Case XXX, the PSE, Resident Engineer (RE)and Assistant Clerk of Works recruited and engaged by the consultant on site had no experience in supervising the installation of PPC piles.. They were basically unable to follow the guidelines to supervise properly or to inspect critically the piling works carried out by the contractor.

**Unsatisfactory Staff Attitude**

**4.19** In Case XXX, the HD liaison team, comprising the LSE, the LSSE and the CSE, were responsible for monitoring the performance of the Consultant Architect and the Structural

[1] EPD requirements allow no work on site after 7:00 p.m. that exceeds the noise limit prescribed for the site under the Noise Control Ordinance.

Sub-Consultant. Some of its members relied heavily on consultancy firm for technical and quality checking. Some focused mainly on the time and cost of the project with little attention to technical matters. As a result, they did not detect the unsatisfactory performance of the consultants and contractors.

**4.20** Members of the HD liaison team were also preoccupied with the project cost and timetable. They relied almost totally on the consultancy firm's recommendations in accepting the contractor's design assumptions and construction method without any counter-checking or assessment of the contractor's or consultancy firm's technical performance on the project.

**Unclear Lines of Command and Excessive Delegation**

**4.21** The report of the investigation panel on Case XXX pointed out that the lines of command and responsibility were unclear among the PD, PE and the site staff, and particularly the lack of overall control over the different levels of staff involved in the project. The CTO, responsible for providing and supervising site inspection staff, reported to a PM (an architect) who in turn reported to a PD. This PD, however, was different from the PD to whom the PE and his engineering subordinates reported. The site inspection staff had a dotted line for reporting to the PE, but their performance was appraised by the CTO. Such an organization structure did not reinforce clear lines of command and responsibility.

**4.22** Excessively extensive delegation was also evident. Although the HD Site Inspection Manual required the PE to

conduct different inspections, HD common practice also allowed him to delegate some of these inspections to site staff. As a result, the PE was involved in practically none of the inspections even though he signed all the certificates required by HD.

**4.23** HD considered its management system to have in-built checkpoints for ascertaining the depth of piles on building sites, e.g. inspection of the founding levels, measurement of the temporary casings, bored holes and liners, performance of sonic tests and coring tests. However, the contract team did not take site inspection seriously. The inspection duties of both the PSE and the Project Clerk of Works, set out in the Manual step-by-step, were delegated to the Works Supervisor, the most junior and an inexperienced officer in the team.

**Inadequate Supervision and Control**

**4.24** Under contractual arrangements, the main contractor was responsible for the satisfactory delivery of the final product. As a normal industry-wide practice, HD imposed a contractual requirement for contractors to provide continuous supervision. HD did not allow total subcontracting, but in line with practice in the industry allowed the main contractor to sub-let part of the works to subcontractors, who were then required to supervise their own workers. This common, and much criticised, practice in the local construction industry opened up opportunities for multiple subcontracting. With multiple subcontracting, the main contractor would easily lose control over site progress and quality standards. This is particularly so in piling works because subcontractors tend

to be small operators, relatively less organised to deliver quality works. On the other hand, prevalent contractual arrangements would require such subcontractors to bear the technical and financial risks transferred from the main contractor. Hence, if subcontractors encountered difficult ground conditions or where they had secured contracts at unrealistically low budgets (due to keen competition or profiteering activities through the chain of subcontracting), the temptation to cut corners would be almost irresistible. Scope for irregularities would also be inevitable.

**4.25** In Case XXX, the main contractor did not supervise its subcontractor during the piling process. The main contractor did not assign any full-time representative on site when the LDBP were installed, but relied upon HD staff to check both the quality and quantity of the work of its subcontractor.

**4.26** In Case XXX, an outsourced project, the Consultant Architect as the lead consultant had appointed a Geotechnical Sub-Consultant for geotechnical works and a Structural Sub-Consultant for structural engineering works in accordance with the terms of the agreement. The Consultant Architect was required to supervise and assess the performance of the two Sub-Consultants and to exercise overall control over contractors for the execution of the piling project. In this Case, the Consultant Architect did not adequately supervise the piling project or the Sub-Consultants.

**Tendering System**

**4.27** Tenders being awarded to the lowest bid may be an

invitation to risk of poor performance and exploitation of the system by some contractors. In Case XXX, the contractor had taken advantage of HD's practice of awarding tenders to the lowest bid. The contractor's original piling proposal to use 1,882 piles with an average estimated length of 26m was a cost-cutting attempt: the pile length was 6m shorter than the minimum requirement of 32m stipulated in the Foundation Advice Report. The submission at tender stage of an even shorter estimated pile length of 22m was an indication of the contractor's intention to reduce the extent of pre-boring and his attempt to test the limits with the consultants. The contractor's proposal to adopt an alternative piling sequence, different from that in the specifications, also went unchallenged by the consultants and HD.

**Absence of Resident Engineers**

**4.28** There was a lack of appropriate professional staff at HA construction sites to supervise key works. This unsatisfactory site arrangement was found in Case XXX. The consultant employed by HA to supervise the design and construction of the foundation proposed a candidate as RE in September 1996, HD approved the request and the RE reported for duty on site in November 1996. Piling was not yet completed; at least 35 piles were driven to set after that date. The first preliminary pile was tested but failed in November 1996.

**Disregard for Professional Ethics**

**4.29** Some contractors in Case XXX had little regard for professional ethics. Resident site staff signed records

without questions and in some case, even without inspections although these showed considerable discrepancies between the founding levels and the actual length of pile segments. Other evidence of unethical professional behaviour includes the use of piles prior to concrete core testing (known to be contrary to industry practice), the driving of cracked piles and the lack of remedial measures for the sub-standard piles driven.

## OTHER CONTRIBUTING FACTORS

**4.30** To understand more fully the combination of causes of the spate of building problems in public housing, this Office interviewed members of the HA and officials of HB and HD between July to September 2000. In this context, we have examined other contributing factors beyond HA/HD control as follows:

### Economic Downturn

**4.31** By the end of 1997, the construction industry was stricken by the economic downturn. Competition intensified as more and more construction companies cut their prices to vie for HA projects. As a result, tender prices dropped considerably and profit margins were severely narrowed to an unprecedented low. This set the scene for some contractors to resort to unprofessional, or even illegal, practices: they cut costs by cutting corners, they try to bend the law. The economic downturn exerted pressure particularly on those contractors who had earlier tendered into a rising market only to find it collapsing as they commenced works. Some contractors became financially desperate, and vulnerable.

Some suffered cash-flow problems following their loss of business in the private sector. Some tried to recover their losses by exploiting public housing projects, at times illegally and often unethically. HA/HD have repeatedly cited the economic downturn as a factor contributing to the public housing problems.

**Suspect Collaboration and Complicity**

**4.32** The building problems in public housing might also be attributed to suspect collaboration and deliberate complicity by building contractors. Common malpractices in the construction industry compounded the situation. HA has been the largest developer in Hong Kong and its public housing construction programme was extensive, with works underway in more than 130 construction sites to produce nearly 190,000 housing units. HA's capital spending on public housing has substantially increased over the past five financial years, as follows -

| **Capital Spending per Year on Public Housing** | | |
|---|---|---|
| **Year** | **$ Million** | **Increase over 1995/1996** |
| 1995/1996 | 8,387 | -- |
| 1996/1997 | 11,420 | 36% |
| 1997/1998 | 13,956 | 66% |
| 1998/1999 | 21,709 | 159% |
| 1999/2000 | 30,400 | 262% |

[Source: HD on 21.3.2001]

HA/HD has pointed out that public housing projects on such massive scale in budget and volume offered obvious opportunities for malpractice and temptation for criminal collaboration.

**Uneven Land Supply**

**4.33** Supply of land for public housing experienced considerable fluctuations in the 1990s. Since the establishment of the HB[2] in late 1994 to set an overall programme for housing development, land supply has substantially stabilized. With the establishment of HOUSCOM in 1997, there has been further and remarkable improvement as Government gives top priority for public housing development against all other claims for land.

**4.34** The table below shows the fluctuations in land supply for public housing development[3]. Some HA members considered that the upsurge in land supply had resulted in an increase in housing production from 30,000 to 35,000 units per annum prior to 1997 to around 90,000 units in 2000/2001. Such substantial increase created considerable difficulties for HD in the deployment of resources and quality control and assurance.

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[2] HB was established in November 1994. Its main responsibility is to formulate strategic policies on the provision of housing in the public and private sectors, and to coordinate and monitor the implementation of these policies by government departments, the HA, the HKHS and private developers.

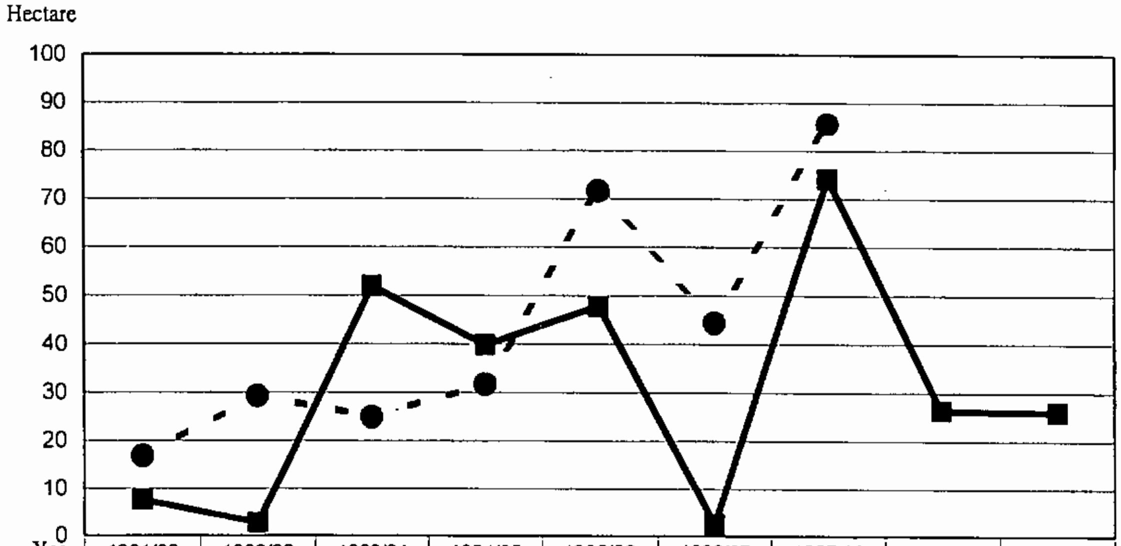
[3] Annex 4-1: figures provided by HB on the new land allocated to HA for public / assisted housing developments indicate the trend of fluctuation in land supply.

| Land Allocated for Public Housing Development between 1991/1992 and 1999/2000 | |
|---|---|
| **Year** | **Gross Site Area (hectare)** |
| 1991/1992 | 7.6 |
| 1992/1993 | 2.8 |
| 1993/1994 | 51.9 |
| 1994/1995 | 39.8 |
| 1995/1996 | 47.8 |
| 1996/1997 | 2.6 |
| 1997/1998 | 74.1 |
| 1998/1999 | 26.4 |
| 1999/2000 | 26.0 |

[Source: HD on 21.3.2001 & 28.5.2001]

Statistics provided by HB and HD show fluctuations in land supply over the past decade, as follows-

***Land Allocated for Public Housing Development***




| Year | 1991/92 | 1992/93 | 1993/94 | 1994/95 | 1995/96 | 1996/97 | 1997/98 | 1998/99 | 1999/2000 |
|---|---|---|---|---|---|---|---|---|---|
| HB | 16.9 | 29.3 | 25 | 31.7 | 71.7 | 44.4 | 85.6 | - - | - - |
| HD | 7.6 | 2.8 | 51.9 | 39.8 | 47.8 | 2.6 | 74.1 | 26.4 | 26 |

**Bunching of Housing Production**

**4.35** Uneven land supply resulted in bunching of housing production. HD statistics on the production of flats under construction illustrate this, as follows -

| Year | Flats under Construction | Increase over 1995 |
|---|---|---|
| 1995 | 89,572 | -- |
| 1996 | 95,407 | 7% |
| 1997 | 114,022 | 27% |
| 1998 | 167,890 | 87% |
| 1999 | 185,446 | 107% |
| 2000 | 166,070 | 85% |

[Source: HD on 21.3.2001]

The number of flats under construction by HD in 1998, 1999 and 2000 almost doubled that in 1995.

**4.36** Since early 1995, HA/HD had been alive to the problem and endeavoured to redress it. They took such measures as increased outsourcing for professional services. The statistics since 1995 evidence this -

| Year | Projects Outsourced to Consultants | Increase over 1995 |
|---|---|---|
| 1995 | 4 | -- |
| 1996 | 17 | 325% |
| 1997 | 35 | 775% |
| 1998 | 45 | 1,025% |
| 1999 | 45 | 1,025% |
| 2000 | 41 | 925% |

[Source: HD on 21.3.2001]

In setting the flat production targets during the six-year period from April 1995 to March 2001, HB maintained that HA/HD had been fully consulted at different stages and they supported the adoption of those targets and did not indicate any difficulty in meeting them. However, HA/HD had conveyed their grave concern to the Government.

**Strain on Staff**

**4.37** Bunching had generated considerable workload and pressure on HD's works-related staff, particularly those for site supervision. The erratic fluctuations in production were unhealthy and created problems for HD in resource planning and adversely affected HD operations.

**4.38** This was especially evident when Government austerity measures to cap the growth of civil service coincided with peak housing production. HD manpower resources were further stretched with the freezing of vacancies for site staff in keeping with Government's zero growth policy and Enhanced Productivity Programme (EPP) without allowing for adjustments

to cater for increase in workload. Although there was no restriction on recruiting on contract, HA/HD did participate in the EPP.

**4.39** Statistics for the five-year period of 1996 to 2000 show that the number of flats and projects under construction had risen quite substantially, while HD's strength of works-related staff had remained relatively stable, around 2,100 to 2,200, as follows -

| Year | Flats under Construction | Projects under Construction | Strength of Works-Related Staff as at 1 April |
|---|---|---|---|
| 1996 | 95,407 | 86 | 2,007 |
| 1997 | 114,022 | 106 | 2,128 |
| 1998 | 167,890 | 137 | 2,159 |
| 1999 | 185,446 | 141 | 2,143 |
| 2000 | 166,070 | 118 | 2,239 |

[Source: HD on 21.3.2001]

**Absence of Third-Party Audit**

**4.40** HA projects are not subject to control under the Buildings Ordinance. Consequently, there has been no external audit or control for HA projects. Clearly, control by BA is no panacea but it could have provided third-party scrutiny and heightened vigilance on site.

**Deficient Operating Systems and Mechanism**

**4.41** Although HA was responsible for the actual

production of public housing units, it could raise concerns but have no control over Government's decision on annual production target. HB (a policy bureau) would question HD (the executive arm of HA) -- instead of HA -- if the production target was not met. Furthermore, HA also has little say over such key personnel matters as the appointment of D of H or the civil servants working to him. Civil servants working for HA are subject to a multitude of policy, administrative and personnel controls, both direct and indirect, exercised through HB or other Government agencies. Meanwhile, HB indirectly exerts pressure, and therefore control, over HD. This should not be necessary: S for H, as an official member of HA, could and should have raised Government's concerns directly with CHA in the regular liaison meetings or in HA sessions.

**4.42** Within HD itself, there was a lack of effective communication and feedback among staff. In interviews with this Office, senior officials of HD complained that prior to the discovery of the short-piling problems, they were not advised of any major problems or inadequacies by their junior professional officers or technical officers. On the other hand, some staff have mentioned to this Office that they felt left out and directorate was remote.

**Culture and Practices of the Industry**

**4.43** The practices and deficiencies of the local construction industry impacted on HA projects. The most serious problem is that of "culture"[4]. Across the industry,

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[4] Interviews with HA members and HD officials, QHI papers of HD and Report of the CIRC.

a key consideration seems to have been to make money fast, sometimes at the expense of quality, workmanship and the duty of care. The result is shoddy product and little commitment to service or pride in a project. The tendency for workers to be daily rated makes for high turnover and compounds the unsatisfactory situation.

**4.44** HA/HD consider the ethos and professionalism of the local construction workers to leave much to be desired. As the workers were highly mobile with relatively low social status, the industry should devote more attention to training for workers and to research and development of new technology to enhance the professional knowledge and technical skills of the workforce generally.

**4.45** The industry has been characterized by high construction costs, rated the highest amongst developed territories and attributable to the high labour cost and the suspected cartels on the supply of building materials. The features of the local construction industry -- viz. multiple subcontracting, low-calibre site workers, lack of training for workers, inadequate investment for development and high construction costs -- all contributed to the problems in public housing.

**4.46** In this connection, CE appointed a CIRC in April 2000 under the chairmanship of The Honourable Henry Tang Ying-yen to examine the then current state of the construction industry and to identify specific actions and good practices for improvement (paragraphs 1.4(c) and 6.15).

# 5

# REMEDIES AND IMPROVEMENT INITIATIVES

**BACKGROUND**

**5.1** HA/HD have been commendably quick to rectify. Their series of measures to improve the quality of public housing production include the reform package with the 50 Quality Housing initiatives (QHI) launched in April 2000. In fact, HA/HD have been positively proactive: they initiated investigation with ICAC into their own piling projects where the contractors and subcontractors had been subject to allegations of malpractice in private sector developments. The then CS in LegCo on 28 June 2000 stated, *inter alia*, "I believe that any objective examination of the facts will show the leadership of the Authority and the Department not only recognised the potential problems, but set about in a proactive and systematic manner to pinpoint and then expose them to public scrutiny ....On their own initiative, they inspected all the then ongoing HA projects to identify quality problems, then candidly and unreservedly informed the public of their findings." A programme for implementation in two phases has been mapped out to enhance the overall quality of public housing projects. **Phase One** comprises 25 recommendations to address immediate public concern vital to customers and building safety. **Phase Two** covers another 25 recommendations for

sustaining improvement in the construction process.

**5.2** As the leading public sector client for housing production, HA/HD have always recognised their pivotal role in initiating and fostering improvement to quality and attacking corruption. In this connection, HA/HD have accorded, *inter alia*, due regard to recommendations in the reports by various parties and consulted industry stakeholders and staff associations concerned. In addition, HA/HD have initiated internal reviews and commissioned consultancy studies. They have also taken reference from CIRC recommendations (para. 6.15) to identify areas for operational and administrative improvement.

## CONSTRUCTION PROCESS AND INDEPENDENT CHECKING SYSTEM

**5.3** For the purposes of this direct investigation, we will not rehearse all the remedies and reform adopted and implemented by HA/HD in the overall QHI plan. We will focus on the key improvement measures vital to the construction process and on the independent checking system.

### Tendering System

**5.4** Since August 2000, HA/HD have revised their quality criteria and weightings and the technical/fee score ratio for the selection of consultancy firms, adopting a 70:30 or 80:20 split between performance and price under the enhanced "Two-envelope System": one containing the technical and the other fees proposals. After the first stage assessment on the

technical aspects is completed, the fees proposals of only the top three technical proposal scores will then be opened for the second stage assessment. The aim is to ensure that tenders do not necessarily go to the lowest bidders.

**5.5** In this connection, HA/HD have established a "Premier League" of building contractors as a QHI to secure competent contractors for strategic partnership. The approach is to encourage contractors with sound management system and practices, who can deliver consistently good and reliable services, to participate in public housing projects. A contractor with a satisfactory performance history meeting the requisite criteria can be accredited. In the long run, it is expected to provide a major incentive for contractors to improve their productivity and building quality across the industry.

**Quality of Construction Workforce**

**5.6** The need to improve the ethos and professionalism of local construction workers is clearly evident. Generally speaking, construction workers move frequently from site to site. Such fluid mobility makes it difficult for contractors to retain expertise and experience or for the industry to inculcate a sense of belonging to the employer and vice versa. It also leaves the industry reluctant to invest in training for workers, research and development of new technology.

**5.7** As a professional and responsible workforce is crucial to the delivery of quality construction works, we recognise that enhancing the standards and status of the

construction industry require the concerted efforts of developers and building professionals, contractors/ subcontractors and workers, training authorities and Government. They need to work closely together to upgrade training and to change attitudes.

**Integrity Action Plan**

**5.8** The CIRC report acknowledges, among other things, that "the recent spate of non-complying construction works have underlined the importance of fostering an ethical culture in the industry". To this end, since the introduction of QHI in April 2000 HA/HD have developed a **Comprehensive Integrity Action Plan** in consultation with the industry and the ICAC. It aims to raise the ethos and professionalism of the workforce and to improve the status of the industry. The plan for promoting integrity covers both management and operational issues classified under five major headings as follows -

(a) staff integrity;

(b) site organisation;

(c) procurement and control management;

(d) inspection arrangements; and

(e) material testing and control.

**5.9** On staff integrity, HA/HD have adopted a proactive approach to nurture ethical practice by providing, *inter alia*,

guidelines and training for in-house site staff and resident site staff of consultancy firms.

**5.10** On site organisation, HA/HD have taken steps to strengthen their supervision and project management; to enhance accountability with clear lines of responsibility and reporting system; to reduce paper work and streamline processes; to ensure sufficient resources for site supervision, especially for piling works; to provide induction and refresher training for serving officers; and to improve communications between site and professional staff for better team-building. Generally speaking, HA/HD are adopting a less prescriptive approach to management control and focusing on product quality. They have revised procedures to allow greater delegation of authority, expedite decision-making and facilitate problem-solving on site.

**5.11** On procurement and contract management, HA/HD have enhanced their selection criteria for employment of consultancy firms and reviewed contract provisions on liquidated damages. On technical inspections, new measures have been introduced for site supervision, handover of new flats, technical audit on site supervision and inspection procedures for piling works. On material testing and control, HA/HD have strengthened site security and tightened testing and stock control of building materials.

**5.12** HA/HD have drawn up the Comprehensive Integrity Action Plan with details of proposed tasks, action status and target completion dates.

**Piling Works Improvement Measures**

**5.13** HA/HD have endorsed a "Quality Reform Blueprint" in April 2000 to address inadequacies inherent in their piling process and system in two aspects -

(a) quality reforms on piling works in eight key areas, including -

(i) strengthening site inspection;

(ii) strengthening risk management;

(iii) strengthening the acceptance requirements of piling works;

(iv) strengthening contractor's management and supervision, with further emphasis on control of subcontracting;

(v) reinforcing independent building control;

(vi) strengthening the listing of piling and ground investigation contractors;

(vii) reviewing HD's organisation structure and management policy; and

(viii) strengthening HD's human resource management;

(b) control measures on subcontracting of piling works in five key areas -

(i) restricting the proportion of subcontracting;

(ii) restricting multi-layered subcontracting;

(iii) strengthening contractor's supervision on their subcontractors;

(iv) strengthening control of piling subcontractors; and

(v) strengthening control of design subcontractors.

**5.14** Since October 2000, HA/HD have restricted piling subcontracting activities to no more than one subcontractor for each pile type and further letting is not allowed. To secure competent contractors by tightening up listing and tendering requirements, HA has established its own comprehensive List of Piling Contractors in October 2000.

**Compliance with Buildings Ordinance**

**5.15** In recognition of community expectations for independent third-party scrutiny of HA projects, HA/HD have decided to bring all their construction projects eventually under the control of the Buildings Ordinance. In this connection, Government has been closely examining the proposal and the implications on matters of a legal, technical, resources, programming nature and on staff morale. Meanwhile, HA/HD will continue to observe the requirements of the Buildings Ordinance in the design and construction of new projects. In fact, it has already been a listing requirement for HA's list of contractors to be registered as appropriate as RGBC and/or RSC under the Buildings Ordinance.

**Interim Measures for Independent Checks**

**5.16** HA/HD have also introduced interim measures to prepare for transition to statutory building control by BD.

*New Projects*

**5.17** Generally speaking, HA/HD have already introduced measures to achieve more equitable share of risks with contractors such as a review on the rate of liquidated damages, wider use of engineer's design on piling contracts, strengthening pre-tender ground investigation. For new projects, HA/HD have introduced the following three interim measures -

(a) The ICU, established since November 2000

outside D&CB and directly reporting to D of H, conducts independent checks through-

(i) a Structural Vetting Team for checking piling submissions and conducting site testing, particularly at critical stages where alignment with BD practice is essential; and

(ii) a Building Vetting Team for checking general building plans (including drainage) and inspecting completed HA developments.

BD has seconded one Senior Structural Engineer and one Senior Building Surveyor to HD to advise the vetting teams for bridging functions.

(b) HA/HD aim to enhance personal accountability by progressively aligning practices with BD requirements and extending the scope of ICU checking to other areas such as structural vetting of superstructure and demolition works, centralized processing of plans and administrative control e.g.-

(i) formally nominating relevant personnel to assume the roles of equivalent AP, RSE as well as Authorized Signatories (AS) and Technical Directors (TD) of contractors;

(ii) giving priority to applicants with AP/RSE registration in future recruitment;

(iii) HA/HD is revising specifications, practices and procedures to be in line with or even higher than the standards and requirements under the Buildings Ordinance.

*Existing Projects*

**5.18** Since April 2000, HA/HD have strengthened site supervision to safeguard the quality of piling works. They have also introduced the following measures for added assurance over regulatory compliance -

(a) the Independent Structural Checking Consultant system facilitates the commissioning of consultancy firms for third-party checks on structural adequacy, compliance with specifications and value for money;

(b) In collaboration with BD, training on Building Regulations and their application have been strengthened for technical and professional staff.

**Way Forward**

**5.19** HA/HD have pledged to reform in two phases -

(a) progressive migration towards statutory building control in the long term; and

(b) immediate enhancement in the short term.

Considerations to be taken into account include -

(a) time for ICU to align HA/HD procedures and practices with BD requirements and for staff to keep abreast of the legislation and its application;

(b) need for staff consultation on assumption of roles equivalent to AP/RSE in the private sector; and

(c) the legislative programming, resources and operational implications to Government departments concerned.

# 6

# COMMENTS AND VIEWS ON THE NEED FOR REFORM

**BACKGROUND**

**6.1** In the quest for further improvement initiatives, HA/HD have sought views from their own staff and from others, e.g. Hong Kong Institution of Engineers (HKIE), Hong Kong Institution of Architects (HKIA) and Hong Kong Construction Association (HKCA).

**6.2** When this Office issued the press release on 31 May 2000 announcing this direct investigation, we invited comments from members of the public. We are grateful for the views from the staff, their associations/unions and from professional bodies.

**6.3** A group comprising nine staff associations of HD together with seven other staff associations/unions of the Government works-related departments issued a declaration and two open letters on 31 May 2000, 15 June 2000 and 4 January 2001 respectively to express their concern over HA/HD's handling of the short-piling incidents[1].

**6.4** This Office wrote to each of these sixteen associations/unions for comments. Five responded with their

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[1] The declaration and the two open letters issued by the joint-group of Associations and Unions are at Compendium 6-1, 6-2 and 6-3.

views, viz[2] -

(a) Hong Kong Housing Department Structural Engineers Association;

(b) Hong Kong Housing Department Architects Association;

(c) Association of Local Engineers of Electrical & Mechanical Services Department;

(d) Hong Kong Housing Department Geotechnical Engineers Association; and

(e) Government Local Civil Engineers Association.

**VIEWS FROM HOUSING DEPARTMENT STAFF**

**6.5** HD staff generally support the reform package but, understandably, the concern most consistently expressed by them is in relation to -

(a) the additional workload from implementation of the QHI;

(b) the shortage of necessary manpower for effective reform; and

(c) anxiety over criminal liability and security of employment upon introduction

[2] Copies of correspondence from these staff associations/unions to this Office are at Compendium 6-4.

of regulatory control under the Buildings Ordinance.

**6.6** In response, HA/HD have sought to address their concern by emphasising, *inter alia*, their awareness of the general need for staff consultation and for caution in setting the pace of reform.

## VIEWS FROM PROFESSIONAL BODIES

**6.7** The local professional bodies welcome the reform measures, particularly in strengthening independent checks and supervision of piling works.

**6.8** With regard to independent checks, HKIA and HKIE have indicated no objection to the introduction of "equivalent AP/RSE" for HA/HD projects. They see the value of progressively aligning HA standards and practices under a unified regulatory control system.

**6.9** On the implementation programme of piling works, HKIE has indicated its support for enhanced control measures and for the reform. The measures would strengthen the role and input of professionals concerned in the design and supervision of piling works. However, HKIE has expressed concern over, and urged for, further enhancement of supervisory staff under the consultancy arrangement. In this connection, some engineering sub-consultants have also suggested that they should be given a more explicit role in the appointment of site staff for the foundation works under the current architect-led consultancy arrangement. We understand that all these concerns are being addressed by HA/HD.

## VIEWS FROM HONG KONG CONSTRUCTION ASSOCIATION

**6.10** HKCA has indicated agreement to the measures for reinforcing site supervision of building contracts. It has no objection in principle to upgrading contractors' site supervisory staff and submission of Quality Supervision Plan (QSP) but has requested further study on resource requirements, administration and contractual implications before enforcement.

**6.11** As for interim measures to strengthen regulatory compliance, HKCA sees no particular difficulty in designating the equivalent of TD/AS since their management personnel already fulfil the required obligations under the Buildings Ordinance. While some HKCA members welcome the introduction of the measures to strengthen accountability, others have raised concern over contractual implications, especially for piling works designed and executed by the contractors themselves.

**6.12** Response to the QHI implemented since April 2000 from the above stakeholders as received by HA/HD is summarised[3].

## FINDINGS FROM A CONSULTANCY STUDY

**6.13** A consultancy firm was commissioned in February 2000 to review, *inter alia*, the production process of HA housing developments. The consultant made 26 recommendations, which covered wide-ranging areas of concern including project management, in-house professional services, site supervision,

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[3] Responses to the QHI is at Compendium 6-5.

quality management system, procurement system for professional consultants and contractors and staff management issues[4].

**6.14** The consultant had also obtained views from HD staff and we highlight some salient points below -

Lack of Strategic Leadership

(a) Many staff members feel a lack of clear strategic direction for them to follow.

Directorate Remote from Professional Staff

(b) The multi-tier management hierarchy, the absence of professional leadership at directorate level have left most of the professional staff feeling a sense of remoteness. This is not helped by the physical remoteness of the directorate offices.

Lack of Consultation with Staff

(c) Many have expressed concern over changes having been thrust upon them by the management without any prior consultation. They want to be involved in organisational evolution.

[4] The consultant's recommendations are at Compendium 6-6.

Civil Service Employment and Management Practices

(d) The Civil Service system would impede establishment of a more efficient and accountable organisation in HD.

Low Morale among Professionals

(e) The combination of the inflexible practices of HD and the then recent problems in construction have resulted in low morale among professional staff.

Lack of "Ownership" of Projects

(f) Fragmented responsibilities and frequent staff changes make it difficult for staff to develop a sense of ownership and pride in projects.

Perception of Lack of Trust

(g) Professional staff see the imposition of more audits as a lack of trust in their work.

Hidden Agenda for Privatisation

(h) Many view the privatisation of estate management and the move towards mixed development, private sector joint ventures and subsidised loans as part of a long-term scheme to privatise public

housing. This aggravates their low morale and fear of loss of employment.

Directors shifting Blame

(i) Several staff view their directorate as seeking to blame them for the then recent problems and deflecting responsibility from themselves.

Commitment from Staff on Short Contracts

(j) Employees on short contracts lack commitment.

## IMPACT OF CONSTRUCTION INDUSTRY REVIEW COMMITTEE

### CIRC Findings

**6.15** CE appointed CIRC in April 2000 to examine the then current state of the construction industry and to identify specific actions and good practices for improvement. The CIRC report "Construct for Excellence", released on 18 January 2001, contains 109 recommendations for improvement in the following areas -

(a) fostering a quality culture;

(b) achieving value in construction procurement;

(c) nurturing a professional workforce;

(d) developing an efficient, innovative and productive industry;

(e) improving safety and environment performance; and

(f) devising a new co-ordination framework to drive the implementation of the change programme for the industry.

**6.16** On the whole, HA/HD support the CIRC and have indicated that they would work with the industry to ensure the thorough and swift implementation of the proposed reform measures. Indeed, according to HA/HD, most of the CIRC recommendations which specify HA as the implementing party have either been rolled out or are in the pipeline under the QHI programme. In this connection, some 19 CIRC recommendations have been covered in varying degrees in the HA/HD QHI, set to -

(a) tighten control over subcontracting;

(b) ensure adequate supervisory provision and develop a structured site supervision system;

(c) put in place third-party checking;

(d) strengthen the criteria for selection of consultants;

(e) give greater weighting to performance in determining tendering eligibility and contract award;

(f) achieve systematic risk management and more equitable risk-sharing and exclude exceptionally low bids;

(g) review the current form of contract adopted by the Authority;

(h) encourage collaborative resolution of disputes;

(i) adopt a partnering approach;

(j) employ and increase the percentage of trade tested workers

(k) require consultants and contractors to pledge for probity;

(l) facilitate integration of design and construction in project delivery;

(m) promote wider use of prefabrication, standardised and modular components;

(n) more widely use of information technology;

(o) promote competition in ready mix concrete supply;

(p) incorporate practicable features of the internationally recognised design and management regulations into the safety plan;

(q) promote adoption of integrated sites by giving greater weighting to performance in determining tendering eligibility and contract award;

(r) provide safety training for line managers; and

(s) promote wider use of green design.

**6.17** It is worth mentioning that the CIRC report favours the development of a "partnering approach amongst all major stakeholders concerned", a theme prominently covered in HA/HD's QHI, and emphasises the need for teamwork.

**OTHER COMMENTS**

**6.18** The consultancy report referred to in para. 6.13 above specifically pointed out that "in the future, HA/HD should establish quality benchmarks for public housing that reflect the longer-term aspirations of the community and the stated aims of the Chief Executive to position Hong Kong as a world class city". We fully subscribe to these views and hope that HA/HD and other public sector clients work closely with the industry for full and speedy implementation of the QHI and clearly set out crucial benchmarks for reference and compliance by all parties concerned.

# 7

# *OBSERVATIONS AND OPINIONS*

**7.1** From our investigation, we have some observations and some views.

## ROLES AND RESPONSIBILITIES OF MAJOR PLAYERS

### Relationship between HA and HD

**7.2** The relationship between HA and HD is an area for particular focus. Legally, both in theory and in practice, HA is the "master", the source of authority and the decision-maker on strategic and policy levels. HD is its "agent" and executive with responsibility for operations and for technical decisions only. In other words, what HA wills should be HD's work. HA should be accountable for the formulation of operational policies under the strategic framework set by Government. In reality, however, to all intents and purposes HA and HD seem to have been a "fused" body with fudged roles. To illustrate, we examine below the working relationship between BC of HA and D&CB of HD.

**7.3** Firstly, BC is heavily involved in the day-to-day operational matters of D&CB. In particular, BC serves as a tender board for letting out consultancy agreements and

building contracts for all HA construction projects; the authority for approving briefs, plans and designs of all construction projects; and a disciplinary board for defaulting consultants and contractors (para. 2.14). Secondly, BC has to deliberate on many papers within limited meeting time (para. 2.17). This is particularly relevant as BC members are busy people serving on a part-time voluntary basis (para. 2.15).

**7.4** The merit of BC overseeing the work of D&CB is to ensure fairness of the tendering system and compliance with HA policies. There are, however, drawbacks for BC to have become so deeply involved in operational matters. Firstly, it inevitably slows down the housing production process as the approval of BC must be sought at critical stages of the production process. Secondly, because of the need for BC to deliberate on a wide range of issues, it cannot focus on individual projects and more importantly, on strategic and policy issues. Thirdly, because the non-official BC members are part-time volunteers and busy people, they have to rely heavily on the information from and the judgement of HD professional staff. Fourthly, responsibility and accountability become blurred when decisions are made by BC collectively in response to information provided by HD. In case of error, it is difficult to determine whether BC (which took the decision) or HD (which provided the information and implemented the decision) should be held accountable.

**7.5** For reference, HKHS has been re-structured since December 2000 to improve operational efficiency, reduce overlapping responsibilities and enhance the accountability of the governance board and the management (paragraphs 2.39

and 2.40). HA and HD should critically review their working relationship, taking reference from the experience of HKHS.

**HA Committee Structure and Decision-making Process**

**7.6** Many non-official members of HA and its standing committees also serve on other Government boards and committees and on the boards of directors of public and private corporations. Often, with the best will in the world, they do not have adequate time for the work of HA and its committees.

**7.7** Decision-making in HA is structured on a standing committee system. Papers prepared by HD are submitted to HA and its standing committees for discussion and endorsement. Essentially, HD sets the agenda and prepares the materials for meetings. HD has considerable influence over what, and when, matters are discussed and therefore how they are decided by HA and its standing committees (para. 2.16). Members have to rely on HD staff and work on the information presented. Some members, both official and non-official, have low attendance. This has cast doubt on the credibility and effectiveness of HA and its standing committees in steering and overseeing the activities and services of HD.

**7.8** An internal review of the HA's production process conducted by a consultant commissioned by HA (para. 6.13) noted, "A consistent problem expressed in interviews, both internally and externally, is the variety of client bodies involved in the development approval process and the substantial changes made by these bodies as projects move through the various design and construction phases". This had led to concern that these changes, often with considerable

and even conflicting implications in terms of project efficiency and cost, had been unchallenged by the project managers instead of being scrutinised critically.

**7.9** This Office shares the consultant's concern over a lack of proper mechanism for processing and approving requests for changes to projects. For greater administrative efficiency, more effective control and clearer accountability, HA should review and tighten the procedures. An option, proposed by the consultant, is to set up a committee for each development project and charge it with the responsibility for overseeing its implementation from inception to completion. The same committee would be responsible for considering and approving requests for changes. This Office considers this a practical solution well worth HA consideration.

**Roles, Functions and Responsibilities of HD**

**7.10** Under section 6A of the Housing Ordinance, HA may employ its own staff, on such terms and conditions as it may determine. This Office notes that in practice, its executive arm HD is staffed mostly by career civil servants and operates much as a Government department. Non-civil service staff employed directly by HA represent only 9% of the total establishment (para. 2.21). The directorate comprises mainly career civil servants. To enhance accountability, there should be greater scope for HA to hire and fire staff (para. 2.23). This Office considers that more flexible recruitment and deployment of staff will enable HA to respond more effectively to its requirements.

**Tripartite Relationship: HA, HD and HB**

**7.11** HA, HD and HB are intended to have clearly defined roles and responsibilities, with HB and HA being responsible for the formulation of public housing policy at the macro and micro level respectively and HD for the implementation of the policies set by HA (para. 2.33).

**7.12** However, the dividing line between macro and micro public housing policies is rather blurred, with grey areas in between. This had at times created difficulties for HD and tension for HA and HB.

**7.13** There are also comments that HB seems at times to have exerted undue influence on HD officials behind the scenes. An example quoted by an HA member relates to HB's monitoring of HA production (para. 2.37). HB would demand explanation from HD officials direct when the production target was not met. Concern over split loyalty towards HA and HB among HD officials would result in certain disquiet among some HA members and generate operational difficulties for HD.

**7.14** Government has already recognised that this is not conducive to good administration and has set up a Review Committee under CS to review the roles and responsibilities of HA, HD, HB and HKHS and their working relationship (para. 2.46). The review has yet to be completed.

**Responsibility and Accountability**

**7.15** In addressing the question of accountability, we

have taken reference from the ICAC. In 1975, the Commissioner provided a good working definition in his Annual Report, where he quoted the Commissioner of the New York Police as saying, "Superior officers would be accountable only when the act in question was so serious, repeated, or widespread that he knew, or by reasonable diligence should have known, of it or that the conditions would not have developed or persisted if he had demonstrated a level of leadership and supervision commensurate with his assignment"[1]. We consider this a good guide for public officers. The ICAC 1975 Annual Report also explores the problems resulting from the lack of supervision : "...even if adequate instructions exist, there must be a supervisory presence to ensure that they are being properly carried out. A common feature in many studies undertaken so far is a lack of supervision of junior staff, particularly those who operate way from an office. Understandably, supervisory staff are often preoccupied with their other duties, mostly of an administrative nature, which keep them to their desks most of the time. Furthermore, the relatively comfortable office environment may also account for a certain reluctance to visit the scenes of action. Attempts to supervise are often made merely by correspondence on file...".

**7.16** In addition, according to Jabbra and Dwivedi, public service accountability involves "the methods by which a public agency or a public official fulfils its duties and obligations, and the process by which that agency or the public official is required to account for such actions"[2]. In this connection, it is further explained by these two authors that :

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[1] Daley, R. Blue Target

[2] Jabrra, J.G. and Dwivedi, O.P. (eds) (1989) Public Service Accountability : A comparative Perspective. West Hartford, CT : Kumarian Press

"In particular, administrative accountability is attained through clearly delineated hierarchies and established rules and procedures. Administrative officials are subsumed under the leadership and authority of politically appointed ministers who are then held politically accountable through the democratic process. Legal accountability is provided through established legislative and judicial process".

**7.17** Applying these concepts of administrative accountability to Hong Kong, the project professional, technical and site supervisory staff concerned in HD have the responsibility to report deficiencies in the systems and any problems on site. As for the senior directorate in HD, they should regularly review the systems for project management and related operations. They also have a duty to guide staff and monitor their practices and performance. It is significant that the then CHA decided to resign over the short-piling incidents. Clearly, CHA considered herself politically accountable.

**7.18** Under the HOUSCOM's new accountability system, HB is responsible for monitoring the progress of all housing projects, public housing construction projects included. On the other hand, HA exercises the normal vetting and monitoring functions over the public housing construction projects of HD. In other words, both HB and HA monitor the progress of flat production in HD (para. 2.37).

**7.19** HB is responsible for setting the annual production targets and monitoring the progress of public housing production while the actual execution falls on HA. In turn, HA relies heavily on -

(a) HB for policy support and for assistance to acquire land; and

(b) HD for technical and operational execution.

HB, however, maintains that it has no responsibility whatsoever for the quality of HA/HD's final products. HB sees itself as not accountable for public housing construction problems.

**7.20** This situation has resulted in diffuse, and rather confused, responsibility and accountability. The line of command should be such that HD does not serve two "masters". Legitimate avenues exist for Government, through HB, to influence and monitor public housing matters -

(a) HB is represented on HA and some of its standing committees (para. 2.31);

(b) non-official HA members are all appointed by CE (para. 2.10);

(c) CE has powers under the Housing Ordinance to issue specific instructions to HA (para. 2.35); and

(d) S for H has regular meetings with CHA for discussions on matters of mutual interest (para. 2.34).

**Legislation**

**7.21** Construction projects undertaken by HKHS are subject to full control under the Buildings Ordinance. In contrast, while PSPS developments undertaken by developers are subject to the same statutory building control as are other private sector projects, construction projects undertaken by HA are exempted from such control (para. 2.45). Although HA/HD argue that the statutory requirements have generally been subsumed under their procedures and practices (para. 3.32), there remains the need for independent audit for HA construction projects. The criminal sanctions under the Buildings Ordinance generally do not apply to the contractors and consultants working on HA construction projects.

**7.22** It is a common perception, and criticism, that exemption from independent checks has caused HA/HD to be less aware of prevailing building practices and requirements. Furthermore, the absence of criminal sanctions opens up temptation for lax attitudes or, worse, for irregularities. The investigation panel reports on Cases XXX and XXX both recommended that contractors and consultants working on HA construction projects should be subject to such criminal sanctions as those applicable under the Buildings Ordinance. In response, HA/HD have agreed in principle to bring HA construction projects under the Buildings Ordinance in the long term and have, as an interim measure, set up ICU to mirror BD's checking practices (paragraphs 5.16 to 5.19). However, HD staff feel that it would be unfair if only HA construction projects, but not other Government public works projects, were brought under the control of the Buildings Ordinance.

**7.23** As migration towards full building control takes time, HA should as a stopgap measure consider the feasibility of amending the Housing Ordinance to impose criminal sanctions on defaulting contractors and consultants.

## MONITORING AND CONTROL OF PROJECTS

**7.24** This Office believes that the problems associated with the HA construction projects could have been avoided if HA/HD had introduced appropriate measures for effective project management control, proper site supervision and monitoring, firm tendering control and contract management, and independent external checks. Even more crucial is the actual practice and execution.

### Enhancing Project Management Control

*Unclear responsibilities and lines of command*

**7.25** Case XXX has revealed unclear lines of command and responsibilities among members of the project team (para. 4.21). Command figures were indistinct and not co-ordinated. The site inspection staff reported to the CTO, who was in charge of site inspection and supervision and in turn reported to a CA in the same Division. However, the site inspection staff would have to turn to a PE, who is outside their line of command, for engineering input on site. This Office considers that HD should delineate clearly the responsibilities and lines of command among parties involved, to make for well co-ordinated and more effective project management.

*Over-emphasis on documentation*

**7.26** Proliferation of manuals and procedures had affected not only staff engaged in construction projects but also consultants and contractors on HA projects. Some consultants and contractors without previous experience with HA projects held the view that it could take more than six months to familiarize themselves with the relevant works manuals and procedures. As a result, consultants and contractors were prone to spending time and resources on paper work to avoid being held responsible for non-compliance of requirements (para. 4.12).

**7.27** This Office considers quality of delivery is far more important than documentation for its own sake. Guidelines for staff are, of course, necessary but excessive documentation not only generates unnecessary paper work but also reduces the time for staff to go on site for inspection and field supervision. HA/HD should reduce and rationalise operating manuals and guidelines for staff and consultants/ contractors.

*Inadequate monitoring of consultants*

**7.28** Outsourcing projects to consultants was meant to relieve HD from fluctuations in workload and to enrich departmental expertise (paragraphs 3.4 to 3.9). However, the department has not focused sufficiently on the impact and conflict brought about by outsourcing, particularly on the co-ordination of project management. The department did not clearly delineate the roles and responsibilities for project management duties but expected the lead architectural

consultants to co-ordinate the works of their sub-consultants throughout the development and construction stages (para. 3.16).

**7.29** This Office considers that HD should strengthen the monitoring of consultants to ensure quality delivery of outsourced projects. In Case XXX, some HD staff mainly focused on project time and cost with little attention to quality aspects, leaving those to the consultant or the contractor. HD relied almost totally on the recommendations of the consultant in accepting the contractor's design assumptions and construction method without any counter-checking or assessment of their technical performance on the project (para. 4.20). This Office is, therefore, of the view that HD should review the existing practice of leaving most, if not all, technical matters to consultants without audit by HD staff.

*Attitude and approach of HD staff*

**7.30** This Office considers that HD should re-examine its deployment of staff for works supervision, enhance their training and re-orientate their approach and attitude generally.

**7.31** In Case XXX, the consultant's works-related staff were not fully conversant with the HD manuals and had no experience in supervising the technical aspects of such building works as installation of PPC piles (para. 4.18). As a result, some of them were unable to follow the guidelines or critically supervise the piling works carried out by the contractors. Meanwhile, some members of the HD liaison team

perceived their focus to be mainly on project time and cost and not on monitoring the works (para. 4.19). This is a narrow view and not sufficiently responsible attitude.

**7.32** Findings from the investigation on Case XXX point to the need for site staff to exercise their duty of care with greater diligence and due vigilance. They did not report to the Project Engineer incidents and conditions material to the progress and quality of the works. Proper monitoring of the piling works would have required their presence during the critical processes. However, they were found to have consistently left the construction site before 7 p.m. when much of the defective work was executed (para. 4.17).

**7.33** In terms of communication among the middle and senior management within HD, the department has pointed out that extensive and in-depth consultation was held with staff in the course of the Business Process Re-engineering exercise conducted in 1996. However, some senior officials have complained that prior to discovery of the short-piling problems, junior professional and technical officers did not advise them of any major problems or inadequacies (para. 4.42). Meanwhile, some staff felt left out and remote from senior management. This Office considers that HD should rectify such an unsatisfactory situation as positive communication from the ground to the top and vice versa is essential for efficient and effective operations.

**Strengthening Site Supervision and Monitoring**

*Deficiency and inadequacy of existing practices*

**7.34** This Office considers that HD should overhaul its site supervision practices, particularly in relation to staff for works supervision. They were not serious or critical enough about inspection of sites and some would even leave crucial decisions to relatively junior front-line staff.

**7.35** In Case XXX, there was excessive delegation. It is surprising that the inspection duties of both the Project Engineer and the Project Clerk of Works for a piling project worth $63 million, were delegated down to the Works Supervisor, the most junior and an inexperienced officer in the team (para. 4.23). Worse still, the Project Engineer, involved in practically none of the inspections, should have signed all the certificates required by HD Headquarters (para. 4.22). This makes a mockery of contract management and site inspection. This Office sees such extensive delegation to inexperienced junior staff without counter-checking by more senior supervisors to be excessive, unreasonable and irresponsible, positively unfair to junior colleagues and potentially detrimental to the quality of public housing.

**Improving Tendering Control and Contract Management**

*Exploitation of "lowest bid" practice*

**7.36** The tendering system would normally award tenders to the "lowest bid". Case XXX has revealed that the contractor took advantage of this convention. His unrealistic cost-

cutting piling proposal was taken without query or challenge (para. 4.27). This Office considers that HA/HD should build into the tendering system measures for assessing the reasonableness of prices and practicability of proposals.

*Loss of control over multiple subcontracting*

**7.37** HD did not allow total subcontracting but did allow the main contractor to sub-let part of the works to subcontractors, who were required to supervise their own workers (para. 4.24). Multiple subcontracting contributed to the problems.

**7.38** This Office considers that HD should try to minimise multiple subcontracting and certainly to reduce it to a manageable scale. HD should reduce the chain of subcontractors and introduce direct control over them instead of dealing only with the main contractor. In both Cases XXX and XXX, the main contractors failed to supervise the works of their subcontractors (paragraphs 4.25 and 4.26).

**Control under Buildings Ordinance**

*Exemption from Buildings Ordinance*

**7.39** Findings of investigations on Cases XXX and XXX have pointed out the lack of independent third-party audit for HA projects.

**7.40** We observe that HD has taken steps under the QHI towards gradually subjecting HA projects to the Buildings Ordinance. This Office concurs with this plan for migration

as third-party scrutiny and independent audit would enhance staff vigilance and quality assurances.

*Penalties not consistent with private sector counterparts*

**7.41** As HA projects are exempted from the provisions of the Buildings Ordinance, HD staff failing to discharge their duties satisfactorily and professionally would be subject to disciplinary action under Civil Service Regulations - administrative rather than legal sanctions. Such disparity of treatment should be eliminated. This Office considers that defaulters, whether civil servants or their private sector counterparts, should receive the same treatment (para. 3.35).

**EXTERNAL FACTORS**

**7.42** This Office is of the view that the building problems in Cases XXX and XXX could have been avoided had HD conscientiously exercised sufficient monitoring and proper control on these two construction projects. HA/HD has little, if any control over the external factors, outlined in the following paragraphs, which might well have contributed to their problems.

**Economic Downturn**

**7.43** With the economic downturn at the end of 1997, HA projects amounting to some $30 billion in 1990-2000 attracted keen competition among construction companies with the tender normally going to the "lowest bid". This could prejudice a project should the contractor then resort to cost - and corner

- cutting, or worse. This Office considers the prevailing "lowest bid" practice to risk encouraging unrealistic bidding and in the end incurring unforeseen additional costs or resulting in poor quality products (para. 4.31).

**Uneven Land Supply**

**7.44** This Office notes the fluctuation in land supply for public housing development over the past decade and the enormous increase since 1997. This has put significant pressure on public housing production and strain on HD staff (paragraphs 4.33 and 4.34).

**7.45** HA/HD could have little "control" over fluctuation in supply of land. On the other hand, HB responsible for macro and strategic policies on housing and for monitoring implementation should have used to better advantage its key position in HA:

(a) in Government, to reflect fully the views and the difficulties of HA; and

(b) to voice Government's stance and concerns at HA meetings for direct dialogue with members and better mutual understanding.

**7.46** This Office appreciates the efforts of HOUSCOM in keeping watch on land supply and its impact on infrastructure and housing developments (para. 4.33).

**Bunching of Housing Production**

**7.47** This Office believes that bunching, coupled with fluctuations in supply of land, was a formula for problems having regard to HA/HD capability to produce 35,000 flats a year (paragraphs 3.10 and 4.34).

**Industry Culture and Practice**

**7.48** Multiple subcontracting, insufficient quality workers, inadequate investment for development and high construction costs have marked, and marred, the local construction industry in culture and practices (para. 4.45). These factors, largely beyond the control of HA/HD, have also played a part towards the problems in public housing projects.

**7.49** Nevertheless, this Office considers that HA/HD - as the biggest developer in the local construction industry and concurrently the public agent for delivery of public housing - should join forces with Government and the industry to positively influence and promote a better, more responsible "culture". Certainly, with their departmental role and responsibilities, HA/HD must maintain and operate an efficient project management system and an effective supervisory mechanism to exercise proper control over staff and consultants, contractors and subcontractors. They have a duty to ensure the quality of public housing. Even where HA/HD expect consultants, contractors and subcontractors to be responsible for project management and supervision, they should still keep a watching brief and monitor their performance. Even with the best project management system,

HA/HD would still be expected by our community to exercise due diligence and to execute with vigilance.

## HOUSING AUTHORITY/HOUSING DEPARTMENT INITIATIVES AND REMEDIAL MEASURES

### General Observations

**7.50** HA/HD have sprung promptly into action to resolve problems and rectify deficiencies. Most of these remedies and improvement measures in their 50 QHI have already been or are being implemented. Upon satisfactory implementation, they should go a long way towards redressing the situation.

### Audit by BA

**7.51** We note that HA/HD are already strengthening their control mechanism to prepare for scrutiny by the BA (paragraphs 5.15, and 5.17 to 5.19). For projects outsourced since August 2000, HA/HD have incorporated requirements for designating AP/RSE to perform equivalent functions stipulated in the Buildings Ordinance.

**7.52** With HA projects brought under the BA, Government should examine the scope for similar application to public works building projects for consistency.

### Reviewing QHI

**7.53** We note that HA/HD have established a Progress Monitoring Committee since May 2001 for periodic review of

the QHI implementation. This is important: such initiatives have to be updated to continue to be relevant to the needs of the times and to meet the rising expectations of our community.

# 8

# *CONCLUSIONS AND RECOMMENDATIONS*

**GENERAL**

**8.1** Hong Kong has a proud record of providing subsidised housing for more than half the local population. This is largely due to the dedication and determination of members of HA/HD over the decades. These sterling efforts and significant achievement must be fully acknowledged.

**8.2** We also appreciate, and applaud, the earnest endeavours of HA/HD at reform from time to time. We realise that in the wake of the problems with some of their projects, HA/HD quickly begin introducing remedial measures. We look forward to HA/HD's continuous improvement in organisation and particularly in culture. For these endeavours, the Administration need to support and facilitate HA/HD.

**CONCLUSIONS**

**8.3** On the basis of our investigation, this Office has come to the following conclusions -

(a) Unclear working relationships (and at times grey areas) amongst HB, HA and HD are not satisfactory or conducive to

having positive lines of responsibility and accountability. This could put HD staff under some pressure from split loyalty. Certainly, it has given rise to perception of such and uneasiness amongst some HA members.

(b) In setting production targets, the Administration has not sufficiently taken into account the views of HA/HD, or its capacity for delivery.

(c) Members of HA and its standing committees are essentially part-time volunteers. But, they have to make important decisions either at the full HA or under delegated authority respectively. Consideration should be given to whether the responsibilities of HA members have to shoulder are commensurate with their part-time status.

(d) HD should re-examine its tendering practices and introduce measures for preventing exploitation of the tendering system.

(e) Multiple subcontracting without ensuring adequate capability to exercise competent control or appropriate monitoring puts projects at risk, especially where the main contractors fail to supervise subcontractors or have

little regard for the duty of care.

(f) The administrative issues identified indicate collectively deficiencies in HD's project management system for redress. These are now being addressed with the roles and responsibilities of key players more clearly defined under HA's QHI.

(g) HD has been placing far too much importance on paper work and has tended to supervise by documentation and to monitor by paperchase.

(h) As many of the problems identified in construction projects are attributable to unqualified workers on site and unsatisfactory attitude of some HD staff and consultants/contractors, HD should focus on training to improve staff calibre and attitude, and enhance vigilance to monitor consultants and contractors.

(i) It would be in the interest of HA/HD, the Administration and the community at large to bring HA construction projects under the Buildings Ordinance as soon as practicable.

(j) The local construction industry overall needs general improvement in culture and

practices, research and development as demonstrated by CIRC's 109 recommendations.

## RECOMMENDATIONS

**8.4** Against this background, The Ombudsman has made 27 recommendations for consideration by HA/HD and eight for the Administration. Recommendations (c) to (aa) feature in HA/HD's QHI plan. This Office acknowledges and appreciates their earnest endeavours in implementing improvement measures.

**For HA/HD**

*Organisation and Structure*

(a) To review the roles and responsibilities of, and the working relationship between HA and its standing committees and between those committees and their corresponding HD branches;

(b) To review whether the responsibilities of HA members have to shoulder are commensurate with their part-time status;

(c) To review the approval process for HA project development to cut confusion over changes, streamline workflow and enhance efficiency for better quality of works;

(d) To review the staffing policy to improve flexibility of staff deployment and efficiency;

*Communication and Leadership*

(e) To promote among staff commitment to service in an open and accountable culture;

(f) To enhance channels for internal communication and staff feedback;

(g) To foster a closer working relationship and mutual trust between the directorate and staff;

(h) To enhance mechanism for consultation with staff;

(i) To continue to convene workshops and seminars for fostering frank communication and cooperative partnership amongst staff across HD grades and through all ranks;

(j) To review guidelines periodically to update and streamline work procedures as appropriate;

*Contract Management*

(k) To sustain efforts in improving listing and tendering practices, in particular monitoring of subcontractors;

(l) To minimise multiple subcontracting as far as practicable;

(m) To review and define the roles, responsibilities and accountability of those involved in project management;

(n) To devise a more structured and better coordinated site supervision system;

(o) To provide sufficient qualified and experienced staff for site supervision;

(p) To review and define the roles and responsibilities of consultants on outsourced projects and to monitor their work more closely;

(q) To set up a committee for each project and charge it with responsibilities for overseeing its implementation from inception to completion;

*Training and Professionalism*

(r) To intensify induction and refresher training for site supervisory staff;

(s) To intensify ethical and professional training for site supervisory staff;

(t) To review periodically training materials for site supervisory staff;

(u) To cultivate, nurture and sustain professional culture among staff through continuing professional development within HD;

(v) To promote registration of construction workers/site supervisory staff/ subcontractors for quality delivery of HA projects;

*Partnership with Contractors/Consultants*

(w) To strengthen the partnership with contractors and consultants by improving communications;

(x) To continue to review potentially prejudicial contractual terms for better risk-management and more equitable risk-sharing relationship;

*Consultation, Review and Feedback*

(y) To review periodically the progress of implementing the remedial and improvement measures under QHI, in collaboration with relevant bodies and professionals in the construction industry;

(z) To develop closer liaison and consultation with these bodies for sustained improvement in arrangements for site supervision of HA projects;

*Promotion of better culture*

(aa) To join forces with Government and the industry to positively influence and promote a more responsible culture;

***For the Administration***

*Working Relationship*

(bb) To publish the report of the CS' Review Committee, upon completion, to clarify the respective roles, responsibilities and working relationship between HB and HA/HD and to enhance accountability;

*External Control*

(cc) To bring HA projects within the purview of the Buildings Ordinance;

(dd) To apply to HD staff controls applicable to their private sector counterparts under the Buildings Ordinance;

*Legislation*

(ee) To expedite amendment of the Housing

Ordinance and the Buildings Ordinance to bring HA projects within the building control regime.

**OTHER MATTERS**

**8.5** There are other important issues beyond the scope of this investigation having implications for the local construction industry. We do not need to rehearse them here as CIRC has already published its report. Suffice to say that unless there is improvement across the industry, reform within HA/HD alone or even across the Administration would not achieve the desired results.

**8.6** The Ombudsman takes this opportunity to urge **the Administration** -

(ff) To work in partnership with relevant bodies to expedite implementation of the 109 recommendations in the CIRC report for early improvement to the local construction industry ***(Works Bureau)***;

(gg) To examine the scope for public works building projects to be brought within the purview of the Buildings Ordinance ***(Planning and Lands Bureau and Works Bureau)***;

(hh) To review and strengthen the existing administrative arrangements for inviting and selecting tenders for

public works projects and other activities as applicable to redress the much criticised practice of "normally" awarding contracts to the "lowest bidder" ***(Works Bureau);*** and

(ii) To rationalise in consultation with HA/HD the basis of land supply statistics for clearer information ***(Housing Bureau).***

# 9

# *FINAL REMARKS*

**COMMENTS ON THE INVESTIGATION REPORT**

**9.1** We have invited comments from HA, HD, HB, PLB, WB, BD and HKHS. All parties have forwarded their views including suggestions for amendments to text and statistics. We appreciate their response and have carefully examined their comments, most of which have been incorporated into the corresponding paragraphs in Chapters 1 to 8. For those comments and views we have not been able to reflect in the report, we highlight below.

**Uneven land supply**

**9.2** Our investigation reveals that fluctuations in the supply of land for public housing development over the years had put significant pressure on public housing production and strain on HD staff (para. 7.44). HB does not agree that this was one of the factors contributing to the problems in project management of public housing projects. HB, with support from PLB, does not agree that supply of land for public housing was short before 1994. HB maintains that, from Government records, sufficient land had been provided to enable HA to meet implicit production targets announced by Government before and after 1997. HB emphasises that it assisted HA in

obtaining sites for housing development through Government's Land Disposal Committee. Representatives of HB and HD sit on this Committee and D of H is a member of the HOUSCOM, which has been effectively monitoring land supply for public housing development since 1997. Hence, HB and HD have directly facilitated land supply. HB further explains that land supply could not be even every year and was bound to fluctuate from year to year because of changes in housing demand and the varying lead time for land production, planning and provision of infrastructure.

**9.3** However, this Office notes that in early 1995 the former D of H wrote to the then newly appointed S for H to appeal for assistance in identifying sites and averting the risk of slippage. In 1996, HD raised concerns over land supply and bunching of production. HD perceived the problems to be failure to identify sites early enough and to fund their preparation for a steady supply of land. HD highlighted the problem of this becoming increasingly serious, as the lead time to bring sites on-stream lengthened from a five-year to a 12-year norm.

**9.4** The Ombudsman remains of the view that uneven land supply had a bearing on housing production and HD's capacity for delivery. We have examined the land supply statistics provided by HB from 1986/1987 to 1997/1998 and by HD from 1991/1992 to 1999/2000 respectively. The two sets of figures do not tally: apparently, HB and HD adopt different bases and methods for compiling them[1]. Despite such differences, both

[1] In compiling land supply information, HB's figures reflect Government records of sites physically allocated to HA and of figures reported to the Sino-British Land Commission (up to June 1997). While HA has adopted a different approach to suit its own specific operational needs, i.e. based on the dates when the sites were first identified but not yet allocated by the Government.

sets of figures evidence unevenness, and some sharp fluctuations, in land supply. The Ombudsman considers it better for clarity of information, especially for planning purposes, for such statistics to have a common and compatible basis. The Ombudsman suggests that HB and HD should reconcile their approach and work out a uniform set of land supply figures (para 4.34).

**Bunching of Housing Production**

**9.5** Housing production peaked in 2000/2001 (para. 4.34). HB does not agree that in setting production targets, the Administration had not sufficiently taken into account the views of HA/HD or their capacity for delivery. HB maintains that targets for the period April 1995 to March 2001 had been the subject of full consultation with, and the support of, HA/HD on different occasions (e.g. preparation of the 1997 Policy Address and publication of the White Paper in 1998 on Long Term Housing Strategy in Hong Kong). Furthermore, HA/HD did not indicate any difficulty in meeting those targets. As cited in paragraph 9.3 above, both the former, and the present, D of H had conveyed to HB grave concern over the uneven supply of land and bunching of production, expressing doubt as to the practicality of the targets set.

**9.6** HB considers bunching to be mainly the result of slippage of HA's public housing production from the earlier years. HD has explained the many reasons for slippage: e.g. time for re-zoning, resumption, clearance and provision of infrastructure, delay in approval of planning briefs, inclement weather conditions and uneven performance of contractors.

**9.7** On the problems encountered, HD considers that "bunching of production was not the primary cause of the piling problems encountered by HA/HD". Similarly, HB does not agree that bunching, coupled with fluctuations in supply of land, was a formula for problems (para. 7.47).

**9.8** We share HD's view but our focus in this investigation is on project management, not piling problems. Throughout, we see bunching as only one of a combination of factors to HA/HD's problems in project management. The statements from HB and HA/HD indicate that they do not dispute bunching as a cause. As to what causes bunching, The Ombudsman observes that HB responsible for housing policy and HD for delivery view matters differently. HB maintains that HA/HD had been fully consulted on, and supported, the targets; hence, the implication is that bunching was HA/HD's doing, i.e. due to slippage in earlier production. On the other hand, both HA and HD had raised serious concern over the uneven supply of land and the potential difficulties for strict adherence to Government's production targets.

**9.9** Given the purposes of this investigation (para. 1.2), The Ombudsman considers it inappropriate to apportion blame. The Bureau, the Authority and the Department should together tackle problems identified and work for improvement as necessary.

**Tripartite Relationship**

**9.10** HB does not accept some of our findings:

(a) para. 4.41 - that HB indirectly exerts pressure, and therefore control, over HD.

Our view is that S for H, as an official member of HA, could and should have raised Government's concerns directly with CHA in the regular liaison meetings or in HA sessions;

(b) para. 7.13 - that HB seems at times to have exerted undue influence on HD officials behind the scenes.

An example quoted by an HA member relates to HB's monitoring of HA production (para. 2.37). HB would demand explanation from HD officials direct when the production target was not met. Concern over split loyalty towards HA and HB among HD officials would result in certain disquiet among some HA members and generate operational difficulties for HD; and

(c) para. 8.3(a) - that unclear working relationships (and at times grey areas) amongst HB, HA and HD are not

satisfactory or conducive to having positive lines of responsibility and accountability.

This could put HD staff under some pressure from split loyalty. Certainly, it has given rise to perception of such and uneasiness amongst some HA members.

**9.11** HB explains that its main role in public housing is to formulate public housing "policies at macro and strategic level"; and that HA, implementing the majority of the public housing programme, formulates "operational policies" within the strategic framework set by Government. However, HB has admitted that "there may be grey areas between strategic policies and operational policies". The Ombudsman notes that the division of responsibility between HB and HA is now under examination by the CS' Review Committee on the Institutional Framework for Public Housing. HB considers that "it is necessary to have prior communication (formal or informal discussions) and co-operation between HB and HD on important proposals which HD intends to put to HA for consideration. This will ensure that such proposals are in line with the overall macro and strategic housing policy, and will help to achieve more useful, fruitful and constructive results". Regular meetings between HB and HD are therefore "necessary, useful and constructive."

**9.12** HB further comments that HB, HA and HD all play important roles in working together to achieve Government's overall policy objective on housing, to meet the housing needs

and aspirations of Hong Kong people . The question of "split loyalty", therefore, does not arise. HB does admit to some differences of opinion, but suggests this as only natural and not affecting their cordial and co-operative working relationship.

**9.13** The Ombudsman appreciates and, to some extent, shares HB's view but notes that such practices have resulted in :

(a) some confusion of roles or imprecise delineation of responsibilities, particularly for some HA operational matters; and

(b) overlooking the available opportunities for raising issues with CHA direct or in HA regularly.

The Ombudsman considers such situations to be unnecessary and believes they have given rise to questions, and perception of split loyalty. In practical terms, they may not have had much direct bearing on project management, but indications are they made for suspicions among some HA members and possibly problems for some staff.

**Complicity**

**9.14** HD maintains that its project management system has worked for years and recent problems were exceptional, due essentially to "complicity and criminal collaboration". HD argues that for HA contracts over the years, its project

management system did produce quality products regardless of whether the projects were handled in-house or out-sourced to consultants.

**9.15** The Ombudsman fully acknowledges HA/HD achievements over the decades and accepts criminality to be capable of beating the best system. However, our investigation has drawn attention to such practices within the systems as -

- multiple roles for supervision (para. 3.2);
- excessive documentation (paragraphs 4.13 and 7.26);
- inadequate knowledge of operational manuals (paragraphs 4.12 and 4.15); and
- inexperience among field staff (paragraphs 4.16 and 4.18)

These are aspects which could have been avoided and should be addressed.

**Buildings Ordinance**

**9.16** HA and HD have time and again affirmed the need to bring HA building projects within the purview of the Buildings Ordinance, to enhance professionalism and accountability and to bring about uniform statutory standards. Full implementation, however, would take time to complete, in view of the resource implications and the need for inter-

departmental interface. Meanwhile, HA assures this Office that ICU, as an interim measure, is operating satisfactorily. On the other hand, HD cautions that bringing HA building projects within the purview of the Buildings Ordinance is no panacea. We echo this view : the most "perfect" machinery still relies on efficient and effective operators.

**9.17** On bringing HA projects within the purview of the Buildings Ordinance, PLB is in general agreement with our conclusion at paragraph 8.3(i) and our recommendations at paragraphs 8.4(cc) to (ee). We appreciate PLB's cautionary note that the proposals have significant legal, administrative, staffing and financial implications. We accept that careful study is required before a final decision can be taken. PLB's approach is clearly responsibly responsive.

**9.18** HD has stated (para. 3.33) that it has set "similar, and in certain areas even higher, standards required by the Buildings Ordinance", citing as an example the installation of higher railings in corridors of HA projects. BD rejected this example because higher railings do not necessarily mean a higher standard. BD has pointed out that compliance with standard comprises a combination of considerations. In the case of railings, the key question is whether they are designed and constructed to minimise the risk of persons or objects falling, rolling, sliding or slipping through gaps in the barrier, or persons climbing over them.

**9.19** The Ombudsman realises that HA/HD aim high and have good intentions in the public interest. However, BD's remarks raise questions over HA/HD's interpretation of statutory

building standards. The Ombudsman, therefore, endorses HA/HD's view that HA building projects should be subject to the same standard of implementation and supervision, control and audit applicable to private building projects.

**Public Works Building Projects**

**9.20** This Office suggests that the Administration examine the scope for public works building projects to be subject to the purview of the Buildings Ordinance. Both PLB and WB consider that the proposal carries serious and far-reaching policy, resource and staff management implications. WB is concerned that public works projects other than buildings (such as road, bridges, slopes stabilisation work and reservoirs) are undertaken by private firms and vetted by the relevant expert works departments (e.g. Highways Department, Civil Engineering Department and Water Supplies Department). WB emphasises that the present arrangement has been working well. WB further points out that CIRC had also considered a similar proposal to extend building control over various Government projects but finally decided to apply it to HA projects only.

**9.21** The Ombudsman fully appreciates these views and accepts that projects not normally paralleled in the private sector should be considered separately. However, The Ombudsman believes that some form of external checks or third-party audit are essential to ensure quality of Government building projects.

**FINAL REMARKS FROM THE OMBUDSMAN**

**9.22** The Ombudsman should be kept informed of progress on implementation of the recommendations, and would follow up with the relevant bureaux/departments every half-yearly.

**9.23** The Ombudsman expresses sincerest appreciation to HA, HD, HB, PLB, WB, BD and HKHS and all other parties consulted for their co-operation and assistance in the course of this investigation.

---- End ----

**Office of The Ombudsman**
**Ref. OMB/WP/14/1 S.F. 86**
**March 2002**

# LEGEND OF ABBREVIATIONS

| | |
|---|---|
| **ACM** | Assistant Contract Manager |
| **AP** | Authorized Person |
| **AS** | Authorized Signatory |
| **BA** | Building Authority |
| **BC** | Building Committee |
| **BD** | Buildings Department |
| **BD/D** | Business Director/Development |
| **CA** | Chief Architect |
| **CE** | Chief Executive |
| **CHA** | Chairman, Housing Authority |
| **CIRC** | Construction Industry Review Committee |
| **CM** | Contract Manager |
| **CMR** | Contract Manager's Representative |
| **CMS** | Consultant Management Section |
| **CS** | Chief Secretary for Administration |
| **CSE** | Chief Structural Engineer |
| **CSRB** | Consultants Selection and Review Board |
| **CTO** | Chief Technical Officer |
| **D of H** | Director of Housing |
| **D of L** | Director of Lands |
| **D&CB** | Development and Construction Branch |
| **DDRP** | Detailed Design Review Panel |

| | |
|---|---|
| **DIR** | Draft Investigation Report |
| **DR** | Director's Representative |
| **DTL** | Design Team Leader |
| **ExCo** | Executive Council |
| **EPP** | Enhanced Productivity Programme |
| **HA** | Hong Kong Housing Authority |
| **HB** | Housing Bureau |
| **HD** | Housing Department |
| **HKCA** | Hong Kong Construction Association |
| **HKHS** | Hong Kong Housing Society |
| **HKIA** | Hong Kong Institution of Architects |
| **HKIE** | Hong Kong Institution of Engineers |
| **HOS** | Home Ownership Scheme |
| **HOUSCOM** | Steering Committee on Land Supply for Housing |
| **ICAC** | Independent Commission Against Corruption |
| **ICU** | Independent Checking Unit |
| **IR** | Investigation Report |
| **LDBP** | Large Diameter Bored Piles |
| **LegCo** | Legislative Council |
| **LOEU** | Lift Ordinance Enforcement Unit |
| **LSE** | Liaison Structural Engineer |
| **LSSE** | Liaison Senior Structural Engineer |
| **Para.** | Paragraph |
| **PASS** | Performance Assessment Scoring System |

| | |
|---|---|
| **PD** | Project Director |
| **PDRC** | Project Design Review Committee |
| **PE** | Project Engineer |
| **PLB** | Planning and Lands Bureau |
| **PM** | Project Manager |
| **PPC** | Pre-stressed Pre-cast Concrete |
| **PSE** | Project Structural Engineer |
| **PSPS** | Private Sector Participation Scheme |
| **QHI** | Quality Housing Reform Initiatives |
| **QSP** | Quality Supervision Plan |
| **RE** | Resident Engineer |
| **RGBC** | Registered General Building Contractor |
| **RSC** | Registered Specialist Contractor |
| **RSE** | Registered Structural Engineer |
| **S for H** | Secretary for Housing |
| **S for Tsy** | Secretary for Treasury |
| **S for W** | Secretary for Works |
| **SE** | Structural Engineer |
| **SPC** | Strategic Planning Committee |
| **SSE** | Senior Structural Engineer |
| **TD** | Technical Director |
| **WB** | Works Bureau |

## ANNEXES


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## Main Duties of Housing Authority

(i) To liaise with other bodies concerned with housing in both the public and private sectors and to advise the Chief Executive on matters relating to housing.

(ii) To plan, build and redevelop on its own or jointly with others rental housing estates, home ownership scheme estates, interim housing, cottage areas, transit centres, non-residential buildings or premises and such amenities ancillary thereto.

(iii) To manage, maintain and improve rental housing estates, home ownership scheme estates, interim housing, cottage areas, transit centres and non-residential buildings or premises and such amenities ancillary thereto.

(iv) To devise home ownership schemes and to dispose of flats under the various home ownership schemes.

(v) To administer housing subsidy and incentive schemes, including the Home Purchase Loan Scheme.

(vi) To act as Government's agent –

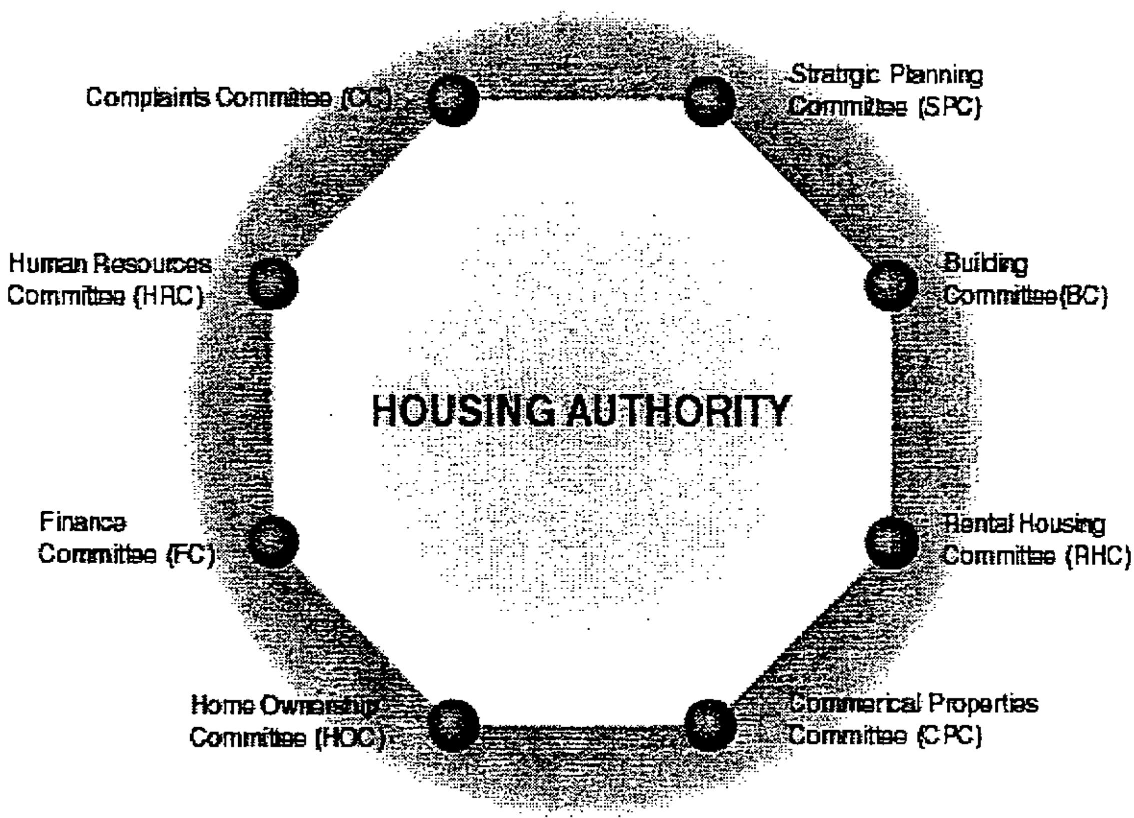
- (a) to clear land;
- (b) to prevent and control squatting;
- (c) to plan and co-ordinate improvements to squatter areas; and
- (d) to plan and to administer the Private Sector Participation Scheme.

(vii) To approve the annual estimates of expenditure and revenue for submission to the Chief Executive.

(viii) To approve the Annual Report for submission to the Chief Executive.

(ix) To approve annual corporate and business plans.

## Committee Structure of Housing Authority



## Terms of Reference of Building Committee

(i) To advise the Housing Authority on the most efficient and cost-effective means of implementing the construction and major improvement and renovation programmes approved by the Strategic Planning Committee and to monitor progress on these programmes (the Development and Construction Business).

(ii) To exercise the powers and functions of the Authority in accordance with prevailing policies for the purpose of the Development and Construction Business –

(a) to review and endorse the business plan and to approve financial targets, service standards and performance measures within the policies and objectives set by the Authority for submission to the Authority for approval;

(b) to monitor performance of the business at all stages including regular review of budget performance;

(c) to approve the briefs, plans and designs for public housing and other related projects;

(d) to approve the appointment of consultants;

(e) to agree to the contracting out of works and services;

(f) to oversee the progress of the housing construction and major improvement/renovation programmes;

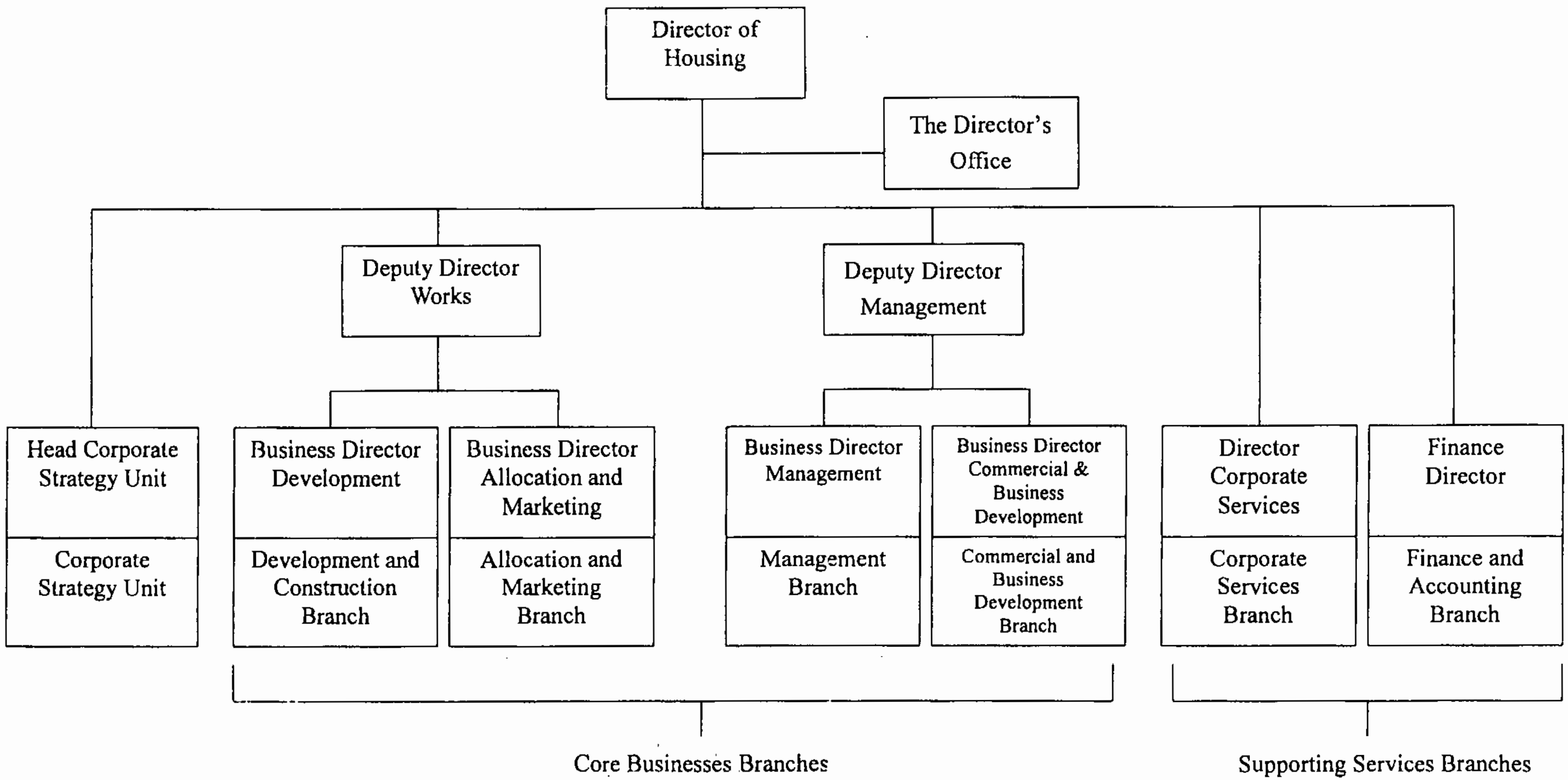
(g) to oversee the management of the Authority's lists of contractors and consultants, and to consider and approve actions concerning status of contractors and consultants on such lists, together with the preparation of tender lists; and

(h) to advise and assist other core business divisions of the Authority so far as development cost yardsticks and building standards are

concerned in meeting their financial targets, service standards and performance measures within the policies and objectives set by the Authority.

(iii) To act as Housing Authority Tender Board for consideration of tenders for projects and services which fall within the terms of reference.

# Organisation Chart of Housing Department




Annex 2–4

# Establishment of Housing Department

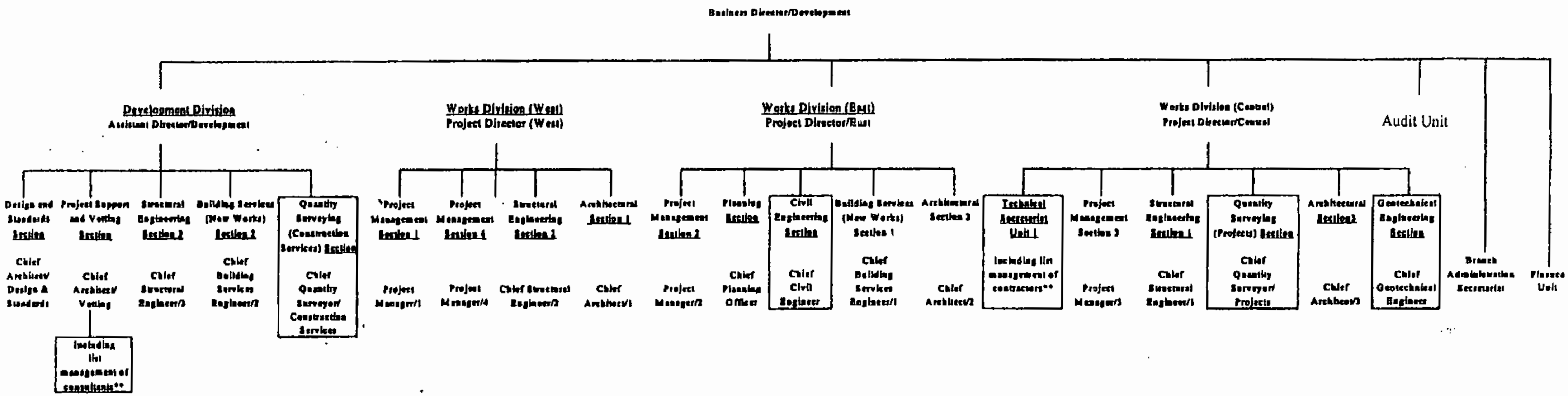
*(Position as at 31 March 2001)*

| BRANCH | CS posts (Note [1]) | HA posts | Total |
|---|---|---|---|
| Allocation and Marketing | 1,949 | 75 | 2,024 |
| Commercial andBusiness Developmen | 338 | 19 | 357 |
| Corporate Sevices | 568 | 147 | 715 |
| Corporate Strategy | 36 | 29 | 65 |
| Development and Construction | 2,141 | 371 | 2,512 |
| Director's Office | 63 | 16 | 79 |
| Finance and Accounting | 139 | 36 | 175 |
| Management | 7,490 | 585 (Note [2]) | 8,075 |
| | 12,724 | 1,278 | 14,002 |

Note [1] Including supernumerary posts created both by the Finance Committee and under delegated authority.

Note [2] Excluding 297 temporary HA posts created under HRC 47/2000 to manage the mis-match in staff complement arising from the difference in the timing between departure of staff under the Voluntary Departure Scheme and the actual outsourcing of the estate management and maintenance services under the approved phased service transfer programme. These temporary HA posts would not be substantively filled but only acting allowances would be granted to the officers concerned who have taken up the duties of the vacant posts in the interim.

**Revised Organisational Structure of Development and Construction Branch**
**(w.e.f. 1.3.99)**

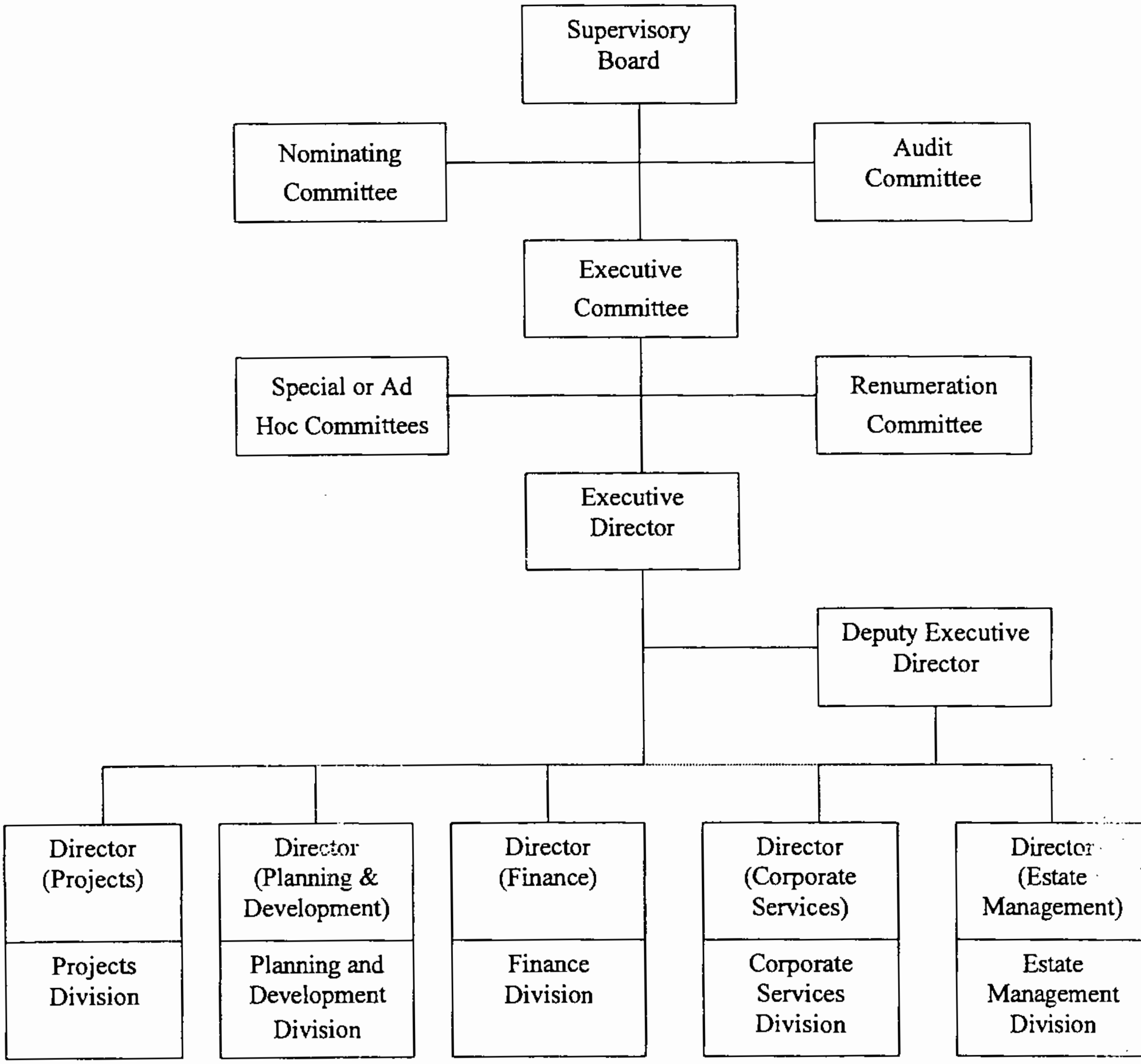



☐ New business transferred from Commercial and Services Branch
** List management functions will be undertaken by PAB in 3 months

Annex 2-6

**Organisation Chart of Housing Society**

(w.e.f. December 2000)



**Annex 3-1**

**Project Management System Before 1997**

Before 1997, project management in HD was mainly the responsibility of the Chief Architects (CAs). CA assumes the multiple roles of Design Team Leader (DTL), Contract Manager (CM) and Project Manager (PM).

Upon approval of the Planning Brief and the inclusion of a project injected into the PHDP, the Project Director would appoint a DTL for the project. The DTL reported to the PM on matters related to the project programme, budget and quality standards to ensure completion of a project that conformed with the Client Brief, HA's requirements and Client Department's requirements for developments on behalf of other Government Departments. The DTL was also responsible for managing and coordinating the multi-disciplinary design, to comply with the programme and to ensure completion of an approved project within budget.

The CM reported on matters of budget and quality standards as they affect the contract. Specifically, the CM was responsible for -

(a) compiling tender documentation required for the contract and acceptance of tenders;
(b) controlling the production quality, progress and financial management of the contract;
(c) identifying resources required to manage the contract and to manage the resource allocated;
(d) undertaking the CM's duties specified in the contract.

As project manager, the CA undertook the following duties -

(a) develop and finalize the client brief and

control plan to incorporate the client's detailed requirements under the approved planning parameters, including those not covered by the approved planning brief;

(b) review design at the Scheme Design and Detailed Design Stages respectively and to seek endorsement from the Departmental Committee/ Panel (i.e. Project Design Review Committee (PDRC), Detailed Design Review Panel (DDRP)) and then approval by BC to any change to the approved design, programme, budget and specifications. (The terms of reference for PDRC and DDRP are at **Annex 3-1-1 and Annex 3-1-2**);

(c) confer with the relevant client departments the programme of the Public Works Project(PWP) items, the CA acting as the PM had to ensure funding availability from Client Departments before execution of works;

(d) review approved project budget and confirm availability of funds at the various milestone processes and seek additional funds through the annual capital budgeting exercise, if required;

(e) receive progress reports from CM (for site formation, foundation contracts) and monitor project matters related to programme, budget and resources as they affect the contract;

(f) monitor the completion of project and take over the site with maintenance documents from previous CM to other CMs;

(g) process the Contractor's Performance Report prepared by the consultants for recommendation to the HD Contractor's Performance Review Committee (CPRC). (The terms of reference for CPRC are at **Annex 3-1-3**).

**Project Management System in 1997**

In 1997, the D&CB of HD was re-organized into a process-oriented structure with dedicated project management function to meet changes in the housing production target[1], to reduce production lead time[2] and to introduce a new accountability system[3].

Given the large number of public housing projects included on the Control List established by HOUSCOM (300 projects comprising about 43,000 flats as of November 1997) and additional projects to be rolled out every year, HD set up three Project Management Sections in the D&CB in November 1997 to manage and monitor progress of projects in the Urban Areas, New Territories West and Islands, and New Territories East and Tung Chung respectively.

HD intended the Project Management setup to be responsible for achieving the targets of the housing production programme through better planning and management of individual projects. It has the responsibility for coordinating with the concerned departments on the works programme, preparing the conceptual layout, controlling and monitoring a project's progress and budget overall including works undertaken by other works departments.

---

[1] Given the Government pledge in 1997 of producing some 175,280 flats during 1999/2000 and 2000/2001, and increase production from 2001/2002 to 2004/2005 from 95,800 flats to about 193,100 flats, HD needed the urgent input of a dedicated project team to handle the overall plan and feasibility studies and coordination with other departments.

[2] To speed up the production time, the BC had acknowledged the decision of HOUSCOM to reduce the production lead time from 62 months to 47 months for standard domestic blocks in October 1997.

[3] HD would set up district level forum to resolve all problems affecting progress including inter-departmental conflicts.

TERMS OF REFERENCE

PROJECT DESIGN REVIEW COMMITTEE

TERMS OF REFERENCE

1. To review and endorse *Housing Department Master Layouts, Client Briefs, Concept Plans* and *Scheme Designs,* and recommend their approval by the *Building Committee (BC)* or directly sanction the approval of their minor amendments within delegated authority;

2. To provide advice as required by the *Housing Department* or the *Housing Authority* on any planning and design issues related to housing and housing-related developments.

MEMBERSHIP

3. *PDRC* comprises the following membership :

a) Chairman : BD/D

b) Members : AD/M(3) - representing BD/M
AD/CP - representing BD/CBD
CES/HOS - representing BD/AM on "HOS" issues
CES/RP - representing BD/AM on "Rental & PSPS" issues
PD/E
PD/C
PD/W
AD/D
CPO
CA/D&S

BC Members - by invitation

c) Secretary : TS/2

d) In Attendance : Relevant staff on a need basis; Project presenters

# TERMS OF REFERENCE

# DETAILED DESIGN REVIEW PANEL

## TERMS OF REFERENCE

1. To review, endorse and recommend to Business Director/Development for approval, detailed layout/design/drawings and specification of buildings and other facilities in connection with non-standard or modification of standard buildings of new public housing development and redevelopment projects and housing-related projects;

2. To ensure compliance with development parameters proposed layout, client requirements and project estimates approved by the Strategic Planning Committee (SPC)

## MEMBERSHIP

| | | | |
|---|---|---|---|
| 3. | Chairperson : | Project Director/Central<br>Project Director/East<br>Project Director/West | for his/her own district |
| 4. | Members : | Assistant Director/Commercial Properties | (BD/C&BD) |
| | | Assistant Director/Management (3) | (BD/M) |
| | | Chief Architect/Design & Standard or Representative | |
| | | Senior Estate Surveyor/H2<br>Senior Estate Surveyor/H3 | (BD/AM)<br>- by rotation (on "HOS" issues) |
| 5. | Secretary : | Technical Secretary/2 | |
| 6. | In Attendance : | Commercial & Services Branch directorate or senior officers as necessary | |
| | | Management Branch directorate or senior officers as necessary | |
| | | Allocation & Marketing Branch directorate or senior officers as necessary | |
| | | Project or design teams for their projects only | |

2 NOVEMBER 2000

TERMS OF REFERENCE
CONTRACTORS PERFORMANCE REVIEW COMMITTEE
(NEW WORKS) - CPRC(NW)

**TERMS OF REFERENCE**

1. (a) to advise and make recommendations as necessary to the List Management Committee (LMC) on Building (New Works) and Soft Landscape Contractors' performance and capability in regard to their tendering eligibility, status on the Lists and disciplinary actions, where appropriate;

   (b) to oversee the development and monitor the operation of the Performance Assessment Scoring System (PASS) for Building (New Works) Contractors and the Performance Reporting System (PRS) for Landscape Contractors, and take necessary actions to ensure their operational effectiveness;

   (c) to receive and review assessments made on contractors;

   (d) to keep records on contractors' overall performance based on received assessments, ensure that contractors' overall performance records are kept up-to-date, and to prepare comparative tables of all contractors' performance according to schedule;

   (e) to inform contractors of their individual contract assessment and their overall comparative performance record;

   (f) to liaise with the Works Bureau on contractors' performance and status on the respective Lists of both parties; and,

   (g) to undertake specific reviews as required by the LMC.

**Membership**

| | | |
|---|---|---|
| 2. Chairman | : | Project Director / West (PD/W) |
| Members | : | Chief Professionals engaged in Building (New Works) and Soft Landscape Contracts |
| Secretary | : | Manager 1 / Counterparty List Management (M1/CLM) |

**Frequency of Meetings**

3. Regular meetings to be held quarterly. Ad hoc meetings to be held as and when necessary.

**Reference**

4. Membership was endorsed by CPRC(NW) on 2 November 2000. To be approved by LMC on 9 November 2000.

## Internal Procedures for Public Housing Development

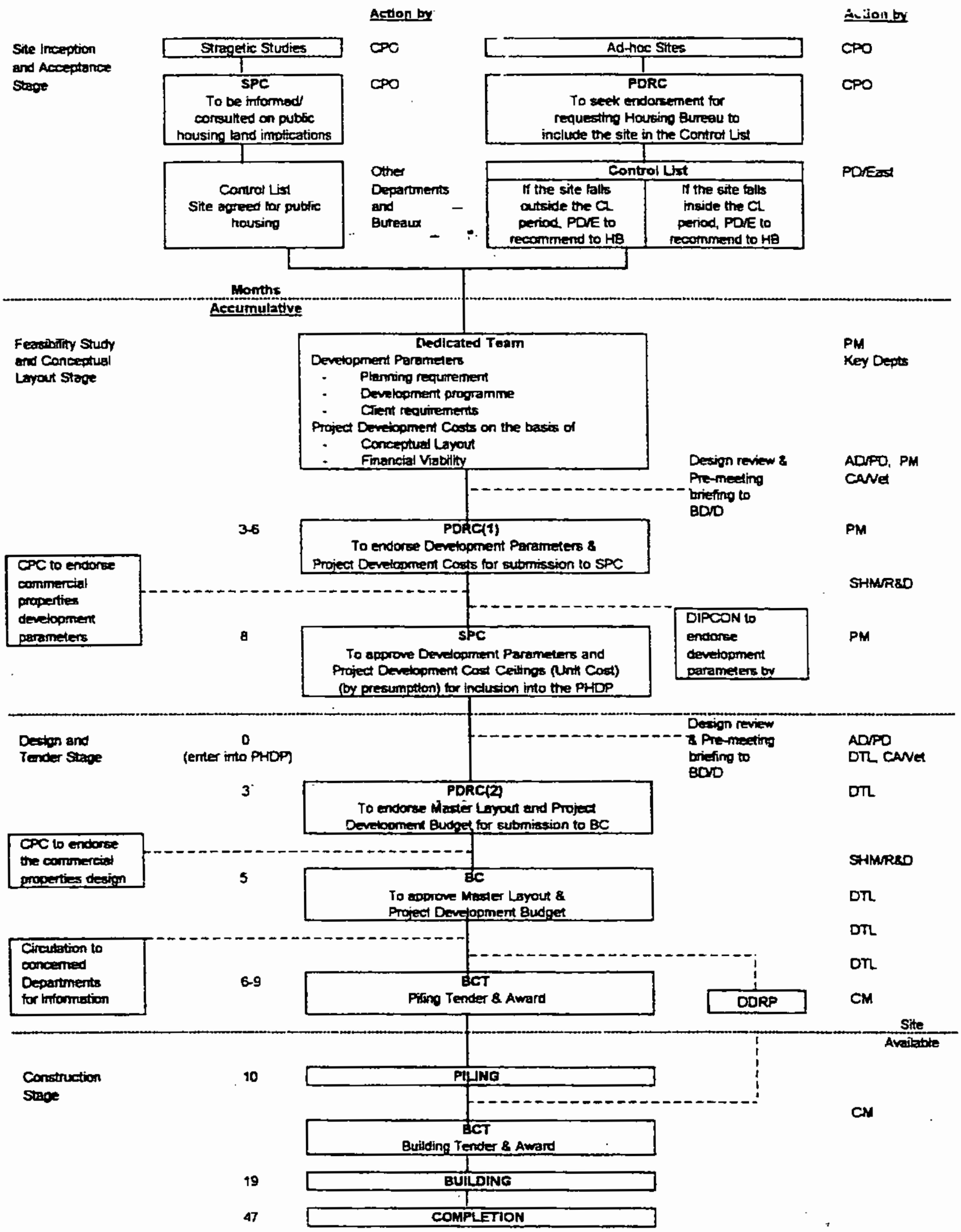



Diagram 1

**Annex 3-3**

**Roles and Responsibilities of Project Manager in Key Stages for Public Housing Development**

(a) Site Inception and Acceptance Stage

Sites are identified through two broad processes

(i) For normal sites, PM formulates the relevant parameters as input into the strategic studies of sites through the Study Steering and Working Groups under Planning Department or Territory Development Department for inclusion in the HOUSCOM Control List, in liaison with the Planning Section where necessary;

(ii) For ad hoc sites, PM conducts technical studies of the site and makes proposal to the Strategic Planning Committee (SPC) and HOUSCOM for inclusion of such sites in the Control List.

(b) Feasibility Study and Conceptual Layout Stage

(i) PM conducts feasibility studies in collaboration with a dedicated inter-departmental working team undertaking the necessary functional and technical studies for the site, and draws up development parameters and conceptual layout. He also establishes the client's requirements and development parameters (such as costs, programme and quality standards);

(ii) PM draws up a development programme based on facilities required, flat production and completion dates for inclusion in Control

List for agreement by the SPC and PDRC. PM then coordinates with the concerned departments on the implementation programme (i.e. rezoning, clearance, resumption, infrastructure provision, site formation and cost), monitors their progress in accordance with the agreed programme and resolves any inter-departmental conflicts at the district level;

(iii) Progress works concerning planning, land, infrastructure and utility services are monitored at the regular meetings attended by relevant works departments and utility companies. They will be asked to take corrective actions if their progress of works affects the timely delivery of housing projects. Unresolved matters are raised to D of H or the Housing Production Action Team (HPAT) for settlement;

(iv) In conjunction with the Financial Controller/D&C, PM prepares the Financial Viability Study and the Project Development Costs. PM then prepares the development proposals, including conceptual layout plans and associated project estimates for submission to the supervising AD to confirm compliance with the client's requirements;

(v) At this juncture, Chief Architect/Vetting (CA/Vet) may assist the supervising AD to perform a third-party check on standards and guidelines prior to submission to the PDRC for approval;

(vi) After incorporating PDRC's comments, PM submits the planning parameter proposal to the District Planning Conference (DIPCON) for endorsement;

(vii) The development proposal will then be submitted to SPC for approval and agreement

to include the project into the PHDP;

(viii) PM conducts public consultation by attending meetings of District Councils or other concerned groups (such as Estate Management Advisory Committee (EMAC) and Occupant Committee (OC)).

(c) Design and Tender Stage

(i) PM liaises with the DTL of the project to ensure that the scheme and detailed design comply with the client's requirements, development parameters and financial requirements. He also monitors progress to ensure that the PDRC and BC submissions are in line with the project programme;

(ii) CA/Vet assists the supervising AD to ensure compliance with the client and statutory requirements prior to submission of the master layout to PDRC.

(d) Construction Stage

(i) PM liaises with the CMs to ensure that the works comply with the client's requirements, development parameters and financial provisions;

(ii) PM monitors the progress and expenditure of various types of housing development contracts. In case of deviation, PM liaises with the DTL and CMs on corrective actions to be taken;

(iii) For any anticipated delay caused by works undertaken by other departments or late changes requested by other client departments affecting completion, PM takes up the relevant matter and resolves via HOUSCOM, if required.

(e) Project Completion and Handover

(i) PM attends pre-handover meetings and inspections with other branches and client departments as appropriate. PM also monitors the handover schedule and any defects and outstanding works.

(f) Maintenance

(i) PM monitors progress of any contentious issues relating to the warranty. Upon completion of outstanding works and remedy of defects, PM releases retention money upon expiry of the maintenance period.

(g) Final Account

(i) PM monitors the settlement of all outstanding claims from contractors. The BC and Departmental Officers at Rank D3 or above can approve variations where the accumulated amount of variations in excess of 10% of the approved contract sum. Other Departmental Officers can only approve variations where the accumulated amount of variations does not exceed 10% of the approved contract sum according to the respective delegated financial authority.

(h) General

(i) PM monitors the programme and budget of public housing projects assigned through all stages of the development process, prepares project status report and monitors the public housing production and financial management.

PM has to report monthly to HB which assumes responsibility for the central monitoring of the overall flat production;

(ii) PM represents HD in dealing with the Legislative Council, The Ombudsman, District Councils, utility companies, other departments, local related/inter-departmental committees and clients.

**Annex 3-4**

Composition of the Contract Team

| Project Director | *(Title under the Contract Team)* |
|---|---|
| ↓ | |
| Chief Structural Engineer (CSE) | *Contract Manager (CM)* |
| ↓ | ↓ |
| Senior Structural Engineer (SSE) | *Assistant Contract Manager (ACM)* |
| ↓ | ↓ |
| Structural Engineer (SE) | *Project Structural Engineer (PSE)*<br>*and the Contract Manager's Representative (CMR)* |

**Annex 3-5**

## OTHER MONITORING AND CONTROL MECHANISMS FOR HA'S BUILDING CONSTRUCTION PROJECTS

### Quality Assurance (ISO 9001)

Before the 1990s, quality control in the local construction industry was largely dependent on inspections against the requirements of contract documents and specifications. The drawback of this approach became apparent when there was an increasing number of building defects such as leaking windows and toilets in the late 1980s. In 1989, the setting up of a quality assurance agency in Hong Kong prompted HA to adopt a different approach to ensure the quality of public housing through a proper and comprehensive management system, commonly known as Quality Assurance System. HA accredited its construction operations to the ISO Standard (Standard) and requested its contractors to follow suit in 1993. The reason for HD to adopt this system were threefold –

(a) to take the lead in fostering a quality assurance culture in the local construction industry;

(b) to tighten quality control over the design of buildings as studies carried out in the UK revealed that 50% of the building failures were due to design related faults; and

(c) to ensure adequate professional resources and standard of service, in the light of the massive 'brain drain' of professionals through emigration and excessive demand for professional services in connection with the Port and Airport projects in

the early 90's.

ISO 9001 system aimed to provide a good management model for quality assurance in design, development, production, installation and servicing. Drawing from the experience of a group of entrepreneurs world-wide, it detailed some twenty elements of good management practice, covering matters such as management responsibility, quality system and contract review. A summary of the twenty ISO 9001 clauses is at **Annex 3-5-1**.

According to the Standard, an organisation was required to plan and organize their business activities into a formal, documented and verifiable system, so that staff knew what was required and that every process would execute as planned. In addition, inspection and audit systems sought to ensure the documented activities were carried out. Conformance with the Standard provided confidence that products or services were turned out consistently according to the desired requirements and were 'right first time' with minimum defects.

In preparation for certification in 1993, HD reviewed its management systems with a view to identifying weaknesses against the Standard and making enhancements where necessary. From 1996, new systems for management reviews, design control, and internal audits were introduced. Contractors were required to organize and inspect their own work upon completion against their established documented system.

According to HA/HD, implementation of the Standard had the following benefits -

(a) the quality management framework helped to prevent and reduce defects and to make improvement;

(b) documented procedures resulted in better organisation and coordination of work;

(c) control of records provided traceability and identified accountability;

(d) continuous surveillance assessments on contractors and consultants by the certifying body compel them to upkeep their systems in quality assurance; and

(e) the Standard drove a continuous and positive change in the management style and culture of contractors.

**PASS**

HA established its own list of building contractors since 1990. In order to facilitate list management, HD adopted the Performance Assessment Scoring System (PASS) to measure the quality of its building contractor's performance since 1991. According to HA/HD, PASS was first introduced in 1991 as a "location-based" type of Output Assessment. In 1992, Output Assessment was changed to "factor-based". By July 1992, the PASS scores were used as a unique tool to replace the old tick box type reporting system, to measure contractors' performance directly for allocation of tendering opportunities.

Every month, HD would carry out an assessment of the quality of works on site at randomly selected locations to determine an appropriate score. This score was then incorporated into the overall assessment of the contractors to arrive at a PASS score. Scores above the upper quartile (75%) of the highest score represented relatively good performance whereas scores below the Lower Score Threshold (LST) drawn at the lower quartile (25%) represented relatively

unsatisfactory performance. The scores formed the basis for comparing relative performance of the contractors. In general, contractors with higher PASS scores were given more tendering opportunities for HD projects than those contractors with lower scores.

PASS 2000 was a later version of the PASS system. Apart from giving greater emphasis to reward contractors with consistently high scores or good quality, PASS 2000 was intended to increase the sampling rate of assessment so that assessment results would reflect more accurately the quality of works on site.

**List Management**

List Management was another mechanism to ensure the quality of buildings in public housing. According to the List Management System (LMS), each application to the list of contractors for HA/HD's projects would be scrutinized and verified against the company's structure, business particulars, resources, work record, quality management system and Building Authority registration.

According to the criteria laid down in the Rules for Administration of the HA List of Piling Contractors (Rules), a successful building contractor would initially be enlisted as a probationary contractor, eligible to undertake not more than two building contracts. Subject to satisfactory completion of one HA contract, probationary contractor might apply for confirmed status in its Category. Performance on HA contract held while on probation would be used in the assessment process for confirmation. A contractor would be confirmed to the List if its technical, management and financial capabilities were assessed as satisfactory.

HA/HD monitored and maintained the listing status of its contractors by a three-tier system. These included the Contractors Performance Review Committees (CPRCs), the List Management Committee (LMC), and the Building Committee (BC). Under such a system, CPRCs monitored the performance of the contractors and prepared feedback reports to LMC. The LMC would review each contractor's listing status to determine whether the contractors' performance was satisfactory. If a contractor's performance was below the required standard, the committee would make recommendations to the BC for instituting appropriate warning or disciplinary actions, such as suspension from tendering for a specific period, demotion, or even removal from the Lists.

**Auditing**

Apart from stimulating a conscientious adherence to essential practices and procedures, an effective audit system would perform the function of a training aid by identifying problems for improvement and be indicative of trends in performance on a global and a project basis. HD established a Technical Audit Unit under the Director's Office, tasked with the technical audit of documents relating to the new works/ maintenance projects, the work of quantity surveying consultants and ad-hoc studies. The audit would assess the performance of both in-house and consultant staff in contract administration, with the objective of identifying deficiencies on technical performance and to encourage improvement if necessary. There were two types of audits, viz. consultant audits and in-house audits, as follows -

Consultant Audits

Consultant audits were conducted on each of the main disciplines (architectural, structural engineering, and building services engineering) on site or in the office by an audit unit. Audit findings were related to contractual or procedural documents, requirements in the consultancy agreement, or technical issues such as calculations.

Teams of two HD site staff carried out site audits, together with checks on the consultant's supervision of works. Office audits were conducted by one HD professional of the appropriate discipline, sometimes with the assistance of technical staff, in the consultant's office, with checks on aspects of the consultant's design and contract management. The frequency of the audits was determined by the extent of work available to be audited. Site work could be audited on an on-going basis, usually one audit per quarter to cover all major activities. A typical project would have five to six office audits at the milestones stages and eight to ten site audits at quarterly intervals, conducted on each of the architectural, structural and building services consultants.

Consultants' performance was monitored by quarterly performance assessment reports to be considered by the CPRB. Assessment over the previous two years were scored, and these scores were incorporated into future tender submissions. Two adverse reports in a six-monthly period would result in automatic suspension for the next six months' batch of tenders.

In-House Audits

Apart from auditing consultants' performance, the department arranged identical audit checks for in-house

projects at half-yearly intervals. In-house audit results would be compared with those of the consultants, and submitted to the BC for reviewing.

Upon completion of the audit, the Site Audit Team would summarize its findings in an audit report. The report is sent through its manager and senior manager to the project team for follow-up action, a summary of the audit results with comments on the findings would also be submitted to the BC for reference every six month.

**Control over Main Contractor and Subcontractor**

HA maintained 10 lists of contractors in 12 main categories of works. HA's Lists of Contractors is at **Annex 3-5-2**. HA had established its own list of approved piling contractors for LDBP only. For driven piles and ground investigation, HA referred to the Works Bureau's list of contractors for reference.

According to HA/HD, subcontracting was a necessary mechanism in the local construction industry to enable developers to maximize the utilization of existing resources and secure good value of money. Different registration/ administration systems had been established to ensure that contractors who carried out private building works and public construction works met certain minimum standards in relation to their financial standing, managerial capability, technical competence and resource capacity.

Under the existing conditions of contract, the main contractor was not permitted to sublet the whole project to its subcontractor(s). However, he was allowed to sublet part of the works.

HA may fall into effective supervision of subcontractors' piling works through the management of the main contractor in accordance with contract requirements. HA also monitored and maintained the listing status of contractor by way of the three-tier system comprising the CPRC, LMC and the BC as mentioned in the preceding paragraphs. According to HA/HD, these three committees would meet every quarter, or ad hoc when necessary, to review the listing status of the contractors. To enhance transparency of performance standards of contractors, the department maintained contact with other government departments to exchange and share information on contractors. In addition, an annual review exercise was also conducted for updating information on HA listed contractors.

**Tendering Control**

To strike a good balance between cost and quality and to find reliable contractors/consultants to deliver works of good quality, HA adopted the 20:80 split between performance and price for evaluating building contract tenders. For consultants, HA adopted a 70:30 split between performance and price. HA/HD conducted pre-qualification exercises for short-listing of contractors. Only those pre-qualified contractors would be eligible for submission of tenders for HA/HD's projects. Besides, HA was not bound to accept the lowest offer of bids if there were justifiable reasons, such as adverse performance and unrealistically low bid. According to HA/HD, 20% of the contracts were not awarded to the lowest bidders in the past few years.

In awarding tenders to the contractors from the approved list, HA considered the following aspects -

(a) financial capability of tenders;

(b) technically sound proposals from tenders;

(c) current workload of tenders;

(d) satisfactory performance of tenders in the past 12 months;

(e) tender price; and

(f) tender contractually in order.

As regards piling contracts, contractors had to submit its method statement for installation of piles and calculations of the proposed piling system at the time of his application. Design calculations also had to be certified by a Registered Structural Engineer (RSE). For those sites in the scheduled area or with complex geology, the contractor had to submit his piling design to the Geotechnical Engineering Office (GEO) for approval prior to commencing piling.

**Monitoring Piling Works**

All piles and piling materials delivered to site had to be checked, verified and recorded by site staff. Samples of materials were taken and passed to independent laboratories for testing to ensure compliance with the specification requirements.

During installation, non-destructive tests had to be conducted by independent laboratories for integrity and loading tests. Pile lengths had to be determined, checked and compared at various stages of the works with records kept by sites staff. The final acceptance of as-built piles was given only after satisfactory results of loading tests and submission of calculations by the contractor to ensure that all as-built piles met the specification and contract

requirements.

Regarding site supervision for driven piling works, the size and composition of site staff team deployed depended on the number of domestic and non-domestic blocks and complexity of a piling project. For a normal in-house project, the site team comprising one clerk of works, one assistant clerk of works and one to two works supervisors. The clerk of works usually had to supervise other projects in the same area. For remote area or site with difficult geology, a full time Resident Engineer (RE) would also be deployed.

According to HD, Site Inspection Manual and other relevant quality manuals such as Consultant Management Manual, Geotechnical Engineering Manual and Contract and Tender Procedures Manual were issued to safeguard records of all inspections, plants and equipment, materials and testing. Under these manuals, the staff had to inspect, witness, record and be present during all salient activities and operations undertaken by the contractors to ensure the quality of buildings in public housing.

**Penalty System**

Apart from the above control mechanisms, HD had set up a penalty system to deter and to penalize substandard performers. According to the contract provisions and the Rules, defaulting contractors and in-house staff were subject to different forms of disciplinary action instituted by the appropriate authorities.

The performance of consultants was monitored by in-house consultant managers by way of quarterly performance assessment reports and considered by the CPRB.

The CPRB would consider disciplinary action on substandard consultants, including automatic suspension of tendering for two adverse reports in a six months period. Audits assisted the CPRB to award adverse reports through the objectivity of the findings. If persistent instances of deficient consultant performance were discovered through audit checkings, the CPRB would consider escalated disciplinary actions against the defaulters. In very serious cases of professional negligence, recommendations would be made to BC for suspension or termination of the agreement. According to HD, all agreements had made provision for immediate termination in case of serious negligence since 1 January 1999. Pre-1999 agreements made specific provision only for termination with notice.

According to contract provisions, contractors had to comply strictly with the contract requirements and to rectify any non-compliance of works at their own expenses. If a contractor failed to complete the rectification works within the specified period, HA would recover the damages by deducting part of the payments. In addition, HA would even terminate the contract and take legal actions to recover further damages from the contractors in serious defaulting cases.

On listing level, penalty to contractors was usually generated from the three-tier system of Contractors List Management as mentioned in the preceding paragraphs. HA/HD explained that a sub-standard performers might be suspended from tendering, downgraded from a confirmed status to probationary status, probationary period being extended, or removal from the list. Automatic suspension from tendering would be imposed on those contractors who failed to comply

with the Rules such as employing illegal immigrants, withdrawing from tenders, or committing site safety offences.

Regarding disciplinary action on in-house staff of HD, those who failed to discharge their duties satisfactorily would be subject to disciplinary action under relevant Civil Service Regulations and / or investigation by ICAC.

# Summary of the Twenty ISO 9001 Clauses

| ISO Clauses | | Requirements in Brief |
|---|---|---|
| 4.1 | Management responsibility | Define quality policy, organization structure, responsibility and authority of personnel; identify resource requirements; conducting management reviews. |
| 4.2 | Quality system | Establish, document and maintain a quality system. The extent of documented procedures depends on organization needs. |
| 4.3 | Contract review | Review one's capability before submission of a tender or acceptance of a contract. |
| 4.4 | Design control | Define client's requirements and design standards; plan design activities; define team members' responsibilities; identify different design contributing groups; provide checking/inspection on work done; regularly review the design results. |
| 4.5 | Document and data control | Properly identify and control all documents and data, particularly changes, to avoid the use of wrong information; documents essential for the effective functioning of the quality system should be available at all locations where operations take place. |
| 4.6 | Purchasing | System established to select and make sure that subcontractors deployed for in-house work and purchasing data can achieve the required quality standard. |
| 4.7 | Control of customer-supplied product | Handle the client's supplied product (material / information) carefully; assess its suitability. |
| 4.8 | Product identification and traceability | Properly identify all documents / products so that they can be easily traced. |
| 4.9 | Process control | Define how work should be done, the technical standards and equipment used; assign qualified personnel and establish suitable hold points along the production process for continuous monitoring and control of work to ensure that the defined standards are met. |
| 4.10 | Inspection and testing | Inspect incoming products on receipt to assure that they conform to the order requirements before they are released for use; inspect and test the work-in-process at critical hold points; conduct final inspection and testing to finished products to assure that they conform to specified quality requirements; records to show that products had been inspected. |
| 4.11 | Control of inspection, measuring and test equipment | Make sure that the equipment used for the measurement and testing of output products are in good order. |

| ISO Clauses | | Requirements in Brief |
|---|---|---|
| 4.12 | Inspection and test status | Records or identifications to indicate clearly whether the inspected / tested products are passed or not. |
| 4.13 | Control of nonconforming product | Make sure that failed products are properly identified to prevent from unintended use or installation. |
| 4.14 | Corrective and preventive action | Take corrective action to fix any problem identified and take appropriate preventive action to prevent the reoccurrence of mistake; analyse feedback, complaints, survey results to avoid potential causes. |
| 4.15 | Handling, storage, packaging, preservation and delivery | Properly handle, store, package, preserve and deliver products and deliverables of services. |
| 4.16 | Control of quality records | Properly identify, collect and maintain quality records; records should be readily retrievable; establish and record the retention times of these records. (Extent of records depends on need) |
| 4.17 | Internal quality audits | Conduct internal audits to make sure that activities and related results comply with planned arrangements. |
| 4.18 | Training | Identify training needs and provide for the training of all personnel performing activities affecting quality. |
| 4.19 | Servicing | Make sure that servicing meets the specified requirements. |
| 4.20 | Statistical techniques | Identify and use statistical techniques needed for process control and verification of product characteristics. |

# Housing Authority (HA)'s Lists of Contractors

HA List of Building Contractors (New Works 1, New Works 2, Maintenance 1, Maintenance 2, Shopping Centre Improvements)

HA List of Soft Landscape for New Works

HA List of Electrical Contractors

HA List of Fire Services and Water Pump Contractors

HA List of Air Conditioning and Ventilation Contractors

HA List of Lift and Escalator Contractors

HA List of Automatic Refuse Collection System Contractors

HA List of Demolition Contractors

HA List of Material Testing Contractors

HA List of Large Diameter Bored Piling Contractors

## New land allocated to Housing Authority for Public/Assisted Housing Developments (1986-87 to 1997-98)

| Year | Total (ha) | |
|---|---|---|
| 1986-87 | 108.8 | |
| 1987-88 | 71.6 | about 490 ha (about 343,000 flats) [1987-88 to 1996-97] |
| 1988-89 | 72.7 | |
| 1989-90 | 88.4 | |
| 1990-91 | 39.3 | |
| 1991-92 | 16.9 | |
| 1992-93 | 29.3 | |
| 1993-94 | 25.0 | |
| 1994-95 | 31.7 | |
| 1995-96 | 71.7 | |
| 1996-97 | 44.4 | |
| 1997-98 | 85.6 | |
| Total | 712.3 * (about 498,000 flats) | |

*Notes:*

1. *These figures are based on cases reported to the Land Commission (up to June 1997) except for the last three quarters of 1997-98.*

2. *The total land area for each year included land :*

   - *handed over to the Housing Authority via the issue of possession licence for Public Rental Housing (PRH) construction,*
   - *agreements executed for land grant for Home Ownership Scheme (HOS) projects; and*
   - *for Private Sector Participation Schemes for which tenders had been awarded.*

3. *The 30 ha earmarked in Dec 1995 were allocated to the HA in 1996-97 and 1997-98.*

* *Included 26.9 ha of land which was allocated to the HA in 1987-88 but had not been reported to the Land Commission in that particular year.*

# 房屋署工務專業協會聯合聲明

我們對於房委會及房署處理圓洲角愉翠苑地基問題調查小組報告之手法極表不滿，特此作出以下聲明:

（一） 公佈手法不當 — 房委會及房署一方面聲稱祗是剛收到報告，需要研究和考慮，兩星期後再決定是否接納，但在另一方面卻於當事人對報告內容沒有機會回應的情況下向外公開。這做法足以造成公眾審判，對當事人的聲譽及其家人造成困擾而引致無可挽回的傷害。

（二） 報告不全面 — 房委會為調查小組訂下的局限性工作範圍，使報告未能指出政策、制度及部門運作上的錯誤和掣肘。同時，該報告顯示調查小組對房署的運作未有充份和正確的理解。

（三） 調查欠公允 — 報告祗記錄事情發生的經過而未有對背後原因作出深入的探討，以至忽略與事件有關的重要環境因素。近年我們面對龐大的建屋量，例如本年度落成單位預計為九萬多，致使各職系的工作量大增。在工程監管上，署方未能以足夠資源及專才，例如增設駐地盤工程師，來配合龐大的增產量。報告未能指出問題所在及考慮其對當事人工作的影響，實屬不公。

（四） 漠視問題癥結 — 報告提出的一些改善建議，其實有關工會早於多年前已向署方提出。可惜署方一直充耳不聞，到現在各宗事故發生後才倉卒作出應變措施。署方過往漠視我們專業工會的意見，現在卻草率地將責任全推在個別員工身上，實對當事人極不公平。

我們在資源極度短缺的情況下，於各種不合理制度的規範下，仍努力不懈地工作，為市民服務。現卻面對房委會及房署不公平的對待，士氣被嚴重打擊，我們深表不滿和遺憾。

房屋署建築師協會
房屋署屋宇裝備工程師協會
房屋署土木工程師協會
房屋署土力工程師協會
房屋署園林建築師協會
房屋署保養測量師協會
房屋署規劃師協會
房屋署工料測量師協會
香港房屋署結構工程師協會

二零零零年五月三十一日

# 就圓洲角地基問題調查小組報告

# 致全港市民公開信

我們，包括房署九個工務專業協會、本地高級公務員協會、政府非海外土木工程師協會和其它五個政府部門的專業協會，對沙田圓州角調查小組報告書，調查不全面、內容不客觀及漠視問題癥結，感到非常失望。報告書祇描述事件發生經過而不提當時工程師身處的客觀環境，對於房署不合理的工程監督制度和根本沒有足夠人手應付三倍於平常建屋量這兩個關鍵問題完全忽略，給公眾一個錯覺，以爲責任全在員工身上。

房屋委員會在有關人士未有機會回應前，全面公佈報告書內容，對四名房署工程師點名批評，此舉把公眾的焦點，引導到他們的身上，對他們本人、家人及整個房署的工務專業人員帶來嚴重的傷害。在政府任職的專業人士對此均極表關注。報告書的內容和房屋委員會的處理手法，令大部分政府專業協會對事件是否會得到公平處理完全失卻信心。

因此，我們強烈要求，將事件交由立法會所成立的專責委員會作公平、公正及全面的調查。把整個事故的基本原因向全港市民作出交代。在事件真相未弄清楚前，政府不應草率進行紀律程序。

我們同時要求房屋委員會和房屋署，馬上檢討和改善工程監督制度和增加人手，以確保公屋的質素。

香港房屋署結構工程師協會
房屋署土力工程師協會
房屋署建築師協會
房屋署屋宇裝備工程師協會
房屋署土木工程師協會
房屋署園林建築師協會
房屋署保養測量師協會
房屋署規劃師協會
房屋署工料測量師協會

本地高級公務員協會
政府非海外土木工程師協會
政府水務專業人員協會
土木工程署本地土力工程師協會
屋宇署結構工程師協會
建築署結構工程師協會
機電工程署本地工程師協會

二零零零年六月十五日

# 就天頌苑及圓洲角事件
# 職員紀律調查小組報告
# 致全港市民和立法會議員的公開信

各位市民，各位立法會議員，您好。

對「天頌苑及圓洲角事件職員紀律調查小組」的報告，我們，包括房屋署十個工務專業人員協會、本地高級公務員協會、和五個政府部門的專業人員協會感到非常失望和憤慨。

極遺憾。這個由謝肅方先生帶領的紀律調查小組，只根據房屋署的工程手冊和文件，來推斷個別人員所須要負上的責任。對於幾個關鍵問題……**工程顧問及地基承建商之失誤，房屋署既不合理又不健全的工程監管制度，以及根本沒有足夠人手來應付三倍於平常的建屋量**，卻完全忽略。並把責任全推在員工身上，署長們竟然以「並非負責日常運作」而置身事外，實在是混淆視聽。確立制度和調配資源，顯然是管理高層的責任。

事實上，去年十二月十九日的立法會房屋事務委員會上，黃星華局長就一再強調，先前由林菲臘先生及施德論先生帶領的兩個調查小組，已經明確地指出，房屋署的制度有各種問題，其後，房委會相應提出了多達五十項改善建議，正好說明問題的所在。

我們質疑：這個調查小組的報告是否全面、公正。不全面的調查，以至片面的分析作結，是嚴重剝奪了公衆的知情權。當局一再假借所謂獨立委員會作報告，以員工作代罪羔羊，企圖掩飾政策及管理上的失誤，更是嚴重打擊員工士氣。

爲了確保正義得以伸張，我們決議全力支援有關員工。懇請各位立法會議員，支持立法會成立專責委員會，全面而公正地調查事件的成因，公正而合理地確定各方應承擔的責任。

香港房屋署結構工程師協會
房屋署土力工程師協會
香港房屋署建築師協會
房屋署屋宇裝備工程師協會
房屋署土木工程師協會
房屋署產業測量師協會
香港房屋署園林建築師協會
房屋署保養測量師協會

本地高級公務員協會
政府水務專業人員協會
土木工程署本地土力工程師協會
屋宇署結構工程師協會
建築署結構工程師協會
機電工程署本地工程師協會
香港房屋署規劃師協會
房屋署工料測量師協會

二零零一年一月四日

**<u>Copies of correspondence from Staff Union/Association received by this Office</u>**

(a) Hong Kong Housing Department Structural Engineers Associations - Letter dated 6 October 2000 - **Compendium 6-4-1**

- Letter to Chairman of Housing Authority dated 19.10.1999 entitled Proposal for Improvement of the Quality of Hosing Projects - **Compendium 6-4-2**

- Letter to Chairman of Housing Authority dated 3.12.1999 entitled Proposal for Improvement of the Quality of Housing Projects Department Organisation - Review of Project Management System - **Compendium 6-4-3**

- Letter to Chairman of Housing Authority dated 31.3.2000 entitled Feedback on the Quality Housing Consultative Document - **Compendium 6-4-4**

- Letter to the Chief Executive dated 22.6.2000 regarding Report on Yuen Chau Kok - **Compendium 6-4-5**

(b) Government Local Civil Engineers Association - Letter dated 21 August 2000 - **Compendium 6-4-6**

(c) Hong Kong Housing Department Architects Association - Letter dated 19 October 2000 - **Compendium 6-4-7**

(d) Association of Local Engineers of Electrical & Mechanical Services Department - Letter dated 14 July 2000 - **Compendium 6-4-8**

(e) Hong Kong Housing Department Geotechnical Engineers Association - Letter dated 1 August 2000 - **Compendium 6-4-9**

HONG KONG HOUSING DEPARTMENT
STRUCTURAL ENGINEERS ASSOCIATION

香港房屋署
結構工程師協會

6 October, 2000

**Direct Investigation into the Management of Construction Projects by the Housing Authority and the Housing Department**

Thank you very much for your letter of 28 June 2000 inviting us to give the views of our association. We apologize for the belated reply.

Enclosed please find four of our previous letters addressed to the Chief Executive and Chairman of Housing Authority in which we have given our views relating to the management of construction projects by the Housing Authority and the Housing Department:

(1) Letter to Chairman of Housing Authority dated 19.10.1999 entitled Proposal for Improvement of the Quality of Housing Projects

(2) Letter to Chairman of Housing Authority dated 3.12.1999 entitled Proposal for Improvement of the Quality of Housing Projects – Review of Project Management System

(3) Letter to Chairman of Housing Authority dated 31.3.2000 entitled Feedback on the Quality Housing Consultative Document

(4) Letter to the Chief Executive dated 22.6.2000 regarding Report on Yuen Chau Kok.

We hope that our views expressed in these four letters will be useful for your investigation.

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We would like to highlight the following:

(a) As far as Housing Department itself is concerned, the inadequacy of staff resources at all levels to meet the housing production especially during the peak since 1997 was one of the most important factors that had led to the quality problems. Our letter to the Chief Executive contains a rough comparison of the resource for housing projects and that for public works projects. It can be seen that the staff resources for housing projects are grossly inadequate. Unless this is addressed, all the reform proposals will just be empty slogans.

(b) The weak professional organization of Development and Construction Branch (D&CB) was in our view another important factor that had led to the quality problems. A much stronger professional organization is essential for proper policy making on works related matters, for crisis management and for effective accruing and sharing of professional knowledge and experience. We suggest that D&CB should be headed by a D5 to D6 officers who should be a building professional similar to all other Works departments. Each discipline should have a Head of Profession. Given that there are three Chief Structrual Engineers currently, the Head of Profession of Structural Engineers should at least be an Assistant Director/Structural Engineering.

(c) The process for deciding client's requirements of projects is badly in need of streamlining. The client's organization is complicated, heavy and poorly organized. This has led to undue length in decision making and frequent and late changes of project requirements, making project management and professional services very difficult. Structural engineering services are particularly hindered because it always means little or no time for proper design. While detailed structural engineering design has to follow architectural design, structural works, both for foundation and superstructure, are the first to start in the construction stage.

(d) We support the setting up of an independent regulatory function within the department separated from D&CB to scrutinize housing projects. We consider that the proposal to put Housing projects under the control of the Building Ordinance is a misconception that it can resolve the quality problems of housing projects, which we do not agree. We must point out that equally serious and greater number of quality problems have actually been found in many private building projects under the control of Building Ordinance. The real solution is, in our opinion, the review and reform of both the department's as well as the industry's quality systems. The setting up of a regulatory function within the department for housing projects will enable the building control process to meet the specific needs of the department. For example, settlement monitoring is a specific requirement of the department but not Buildings Department. It will also be able to address the difference between D&CB, part of a government department, and project management/professional service consultants of the private sector.

(e) Over the last ten years, we have been proposing to the department the deployment of resident engineers and dedicated site staff for structural engineering works. Our letter of 26 April 1996 enclosed as Appendix 6 to our letter to the Chief Executive on 22 June 2000, was just the one immediately before the current peak production period amongst many earlier letters that we had sent to the department. Today, we are beginning to have resident engineers for piling contracts but we still do not have resident engineers for structural engineering works in building contracts nor any dedicated structural engineering site staff for both piling and building contracts. What available now are only civil engineering site staff to replace building site staff for site inspection in piling contracts and building site staff being continued to be deployed in building contracts for site inspection of structural engineering works. They are headed by [redacted] and [redacted] respectively and are not dedicated for structural engineering works.

We sincerely hope that our views would be useful for your investigation and for drawing up a recommendation for improvement of the quality of housing construction.

Our Ref: SEA/8

The Chairman,
The Housing Authority

19 October, 1999

Dear Madam,

**Proposal for Improvement of the Quality of Housing Projects**

The quality problems of housing projects reported in newspapers recently have caused serious damages to the Authority, the Department and staff as well.

As a responsible professional staff association, we feel obliged to voice out below our concern, opinions and proposals for improvement of the quality of housing projects. Some of these proposals have already been given to the management in the past.

**Stronger disciplinary actions against unscrupulous operators**

The large number of piling malpractice cases revealed in Airport core projects, private development and public housing development in the past one year indicate that there are unscrupulous operators in the construction industry. The Housing Authority, as the biggest developer, and the Housing Department, as a government department, should take a leading role to change the situation. The Housing Authority and Housing Department should be determined to take much stronger disciplinary actions against unscrupulous operators. Contractors who are involved in frauds should be removed immediately from approved lists. Key personnel of these contractors should be blacklisted.

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**Unreserved support to hard line approach on quality**

The department's engineers and site staff are qualified and able in their own capacity to ensure compliance of the relevant quality aspects of the works. However, they cannot successfully take a hard-line approach on quality without unreserved support from the management to take the brunt of the possible consequences of slow progress and high cost. Such total commitment of the management will bring forth a quality culture that we strive for in the construction industry to support the construction of quality works.

**Improvement to appointment of consultants and contractors**

The Housing Authority should be more selective in listing approved consultants and contractors. Emphasis should be on quality even though it may mean fewer players and less competitive tenders.

Currently, contracts for both consultancy and construction are effectively awarded on the basis of the lowest tender in most of the time. Under high competition, tender prices have been unreasonably low. Contractors, and possibly consultants also, have been induced to cut corners. In order that capable and righteous contractors and consultants will be employed, much heavier weight should be given to the capability and performance of consultants and contractors in tender assessment.

Consultants of all major profession such as the structural engineer should be directly appointed. Through direct appointment, communication and management, better and unbiased project decision could be made to safeguard the best interest of the client.

**Stage by stage control of housing projects**

Proper stage by stage control of housing projects should be implemented in a manner similar to building control by Buildings Department on private development. This is particularly important for projects outsourced to consultants as they are commercial firms and housing projects are exempted

from building control by the Building Authority. An independent 'Building Control Office' should be set up within Housing Department to implement such control. This office should comprise professionals of relevant disciplines who are responsible for building control of design and construction works of their respective professions. The HD Building Control Office should report directly to the Director of Housing.

Early on, we note that the Director of Housing has suggested in the Legislative Council that housing projects will be put under the control of Buildings Department. However, we consider that a Building Control Office should be set up within the Department in view of the following:

(i) The control process could be established and maintained to address the specific needs of the Department. For example, settlement monitoring is a specific requirement of the Department but not Buildings Department.

(ii) Duplication of quality control by the Department, which may arise if Buildings Department is the controlling authority, could be minimized.

(iii) The Department has capable staff and the expertise to implement such control readily. The new function of the Department will provide staff with opportunities for career development.

It is of paramount importance that the HD's Building Control Office is, and is seen by the Public to be, completely independent of Public Housing Development Programme. Officers in this Control Office must not be subject to pressure arising from programmes and cost of housing projects.

Similar to the practice of Buildings Department, each stage shall commence only after the previous stage has been satisfactorily completed. This will ensure that quality will not be compromised because of cost and time pressure of projects frequently faced by project teams.

All housing projects, including in-house and consultant projects, should be subject to this control. Some of the in-house vetting procedures,

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e.g. counterchecking of structural drawings, technical audits, etc. could be eliminated or reduced to avoid duplication of resources on quality control and hence unnecessary cost.

In particular, we wish to emphasize that the current technical audits, being posterior reviews and often resulting in belated corrective actions, cannot replace the proper stage by stage control of housing projects as described above.

**Addressing Professional and Technical Needs in Policy Making**

In the past few years, the Department has put great emphasis on the importance of good general management and cost effectiveness etc., but placed little importance to professional and technical needs. This has, in our opinion, led to wrong policy decisions. The system for appointment of consultants and the absence of building control for consultancy projects are examples of these wrong decisions. In order to ensure that policy making will address professional and technical needs, senior management of Housing Department should comprise adequate number of works professionals. Structural Engineer, being one of the key professions for building development, should be present in the senior management.

**Deployment of Resident Engineers**

Resident engineers should be deployed to all piling sites, major building sites and complicated building sites, whether consultant or in-house projects, to strengthen site inspection and quality control. Under close guidance and leadership of resident engineers, day to day supervision of structural works by site staff will be greatly enhanced. Deployment of resident engineers on piling sites will enable ground condition and all critical activities of pile installation to be inspected by a professional engineer on the spot. Chief resident engineer/senior resident engineer offices should be strategically set up to oversee site conditions, site input in terms of resources injected and site output in terms of quantity and quality. Resident engineer for a piling contract could also be responsible for contract administration of the respective piling contract.

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**Establishment of dedicated site staff for structural engineering works**

The establishment of dedicated site staff for structural engineering works will ensure that adequate attention will be given to structural engineering works that concern the safety and adequacy of the construction. Valuable experience can be accrued by these dedicated site staff to the benefit of supervising structural engineering works, especially the specialized piling works.

**Streamlining of procedures**

Over the years, the department has been adding large number of procedures to address problems that have arisen from time to time. Procedures have become so abundant and complicated that no staff could follow all the procedures. The management must review the system, streamline procedures, reduce paper work and set priority immediately so that staff as well as consultants could be relieved of unnecessary procedures and the surge of paper works and focus on areas which really warrant priority attention.

**Rationalizing contract requirements**

Short contract periods have induced contractors to cut corner when delays due to unforeseen difficult conditions are encountered. The present construction cycle times for superstructure do not allow sufficient time for inspection by site staff. For quality of works, sufficient time for construction as well as site inspection must be allowed for in contract periods.

Liquidated damages for piling contracts should be rationalized. Currently, liquidated damages of piling contracts for the construction of HOS could amount to about 1.5% of the contract sum per day. A delay of about 2 months will mean that the contractor will suffer from a total loss of all payments. This is certainly a great inducement to piling malpractice whenever delay in progress is encountered.

It is necessary to rationalize contract conditions on the sharing of risk arising from uncertain ground conditions between the employer and the contractor.

Currently, contract conditions put all risks of uncertain ground conditions to contractors, while little pre-tender ground investigation is available for reference by tenderer. This is another great inducement to piling malpractice when unforeseen difficult ground conditions are encountered. One of the methods of reducing the risk of contractors is to increase the number and depth of ground investigation boreholes prior to piling tender and to implement adequate verification checks on these ground investigation results. For very difficult and highly variable ground conditions, perhaps engineer's design and measurement contract should be used instead of lump sum contract.

The role and responsibility of Registered Structural Engineer (RSE) employed under construction contracts for Housing Authority should be clarified. Their performance should be appraised regularly and a central record should be maintained. Unacceptable performance should be reported to Buildings Department for disciplinary actions.

The frequencies of tests on piles should be reviewed and increased on sites where there are significant geological variations.

We earnestly hope that you will find the above proposals constructive and useful. We would be pleased to meet with you to discuss the above. We look forward to working hand in hand with the management to implement actions to improve the quality of housing projects and to rebuild the confidence of the public.

For easy and quick reference by the Director of Housing and Business Director/Development, the same letter has been sent to each of them also.

Compendium 6-4-3

HONG KONG HOUSING DEPARTMENT
STRUCTURAL ENGINEERS ASSOCIATION

香港房屋署
結構工程師協會

3 December, 1999

**Proposal for Improvement of the Quality of Housing Projects**
**Department Organization – Review of Project Management System**

Thank you very much for your letter of 25 October 1999 in reply to our proposal for improvement of the quality of housing projects.

Subsequently, I was invited by [redacted] to join the Working Group on Department Organization for Review of Project Management System. Members of our association as well as myself took the view that I should be deemed to represent our association in attending the working group.

The working group has hitherto held five meetings. In his letter of 26 November, PD/E advised that further meeting of the working group would be arranged only if considered necessary. We therefore consider that it is an appropriate time for us to summarize our views and present them to the authority and the department.

Understanding that the purpose of the reorganization is to improve the quality of public housing, our proposals are:

1. A regulatory body should be set up to implement building control on all housing projects, i.e. both in-house and consultant projects. This body should be completely independent of project execution/management so

..../2

that it will not be subject to cost and time pressure arising from project implementation. Our suggestion is for this regulatory body to report directly to the Director of Housing. This regulatory body should also implement other controls to maintain consistency of quality and standards among housing projects to meet the specific needs of the Housing Authority.

2. The functional organization of the Development and Construction Branch has been weakened excessively in the various re-organizations during the past three years. We consider that this has been one of the factors that lead to the current quality problems. While we agree that a strong project organization is beneficial to the efficient and effective management of housing projects, there is a need to strengthen the functional organization to a suitable level. Our proposals in this respect are:

   i. Each profession should have a head of profession to act a focal point for accruing and sharing of experience and for setting of professional standard. The head of profession could be a part time function, say 25% ~~of his/her time, and~~ supported by a team of subordinates dedicated for such function. For the structural engineering profession, given that there are several Chief Structural Engineers, the head of profession should be at D2 rank.

   ii. Heads of Profession should be involved in making policies that affect the quality of housing projects.

   iii. Following the current practice, for all professions except those without a chief professional, each project should continue to have a responsible chief professional to oversee relevant aspects of design and contract management of each housing project.

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3. It is the consensus view of the working group that the lack of sufficient staff resources at all levels is the key factor leading to the current quality problems. Hence, it is important that the re-organization will be supplemented by a comprehensive review of human resources at all levels including supervisors whose span of control should not be excessive so that they can actually oversee their subordinates effectively.

4. Following the discussion that has been made on workload point and manning scales for Architects by the working group, the preliminary assessment for Structural Engineers in Appendix 1 has been given to the working group. In addition, we envisage that additional structural engineers will be required for building control.

5. We also like to emphasize that resident engineers must be supported by adequate and dedicated site staff resources in order that the required quality of structural engineering works can be achieved. Our proposal for the strength of building site staff in a typical building contract is given in Appendix 2.

Once again, we sincerely hope that you will find our proposals above constructive and useful. With the commitment and enthusiasm of the Housing Authority, we firmly believe that the quality of public housing will be improved and the confidence of the public will be restored in due course.

For quick and easy reference by Director of Housing and Business Director/Development, similar letter has been sent to each of them.

c.c. ]

Appendix 1

**Preliminary assessment of resource requirements for structural engineers by SSE/1 presented to Working Group for Review of Project Management System on 12 November 1999**

Workload Points (WP)

- Project Structural Engineer (PSE) for a project with standard blocks: 0.5 WP
- PSE for a project with blocks on podium, carpark, commercial centre, etc and for non-standard development: 1 WP
- Project Resident Engineer (PRE) for a building contract with 3 or less standard blocks: 0.5 WP
  (A PRE may look after two such building contracts if they are in the vicinity of each other.)
- PRE for a building contract with 4 or more standard blocks, or with blocks on podium, or with carparks/commercial centre or non-standard development 1 WP
- PRE for a piling contract with 3 or less standard blocks 0.5 WP
  (A PRE may look after two such piling contracts if they are in the vicinity of each other)

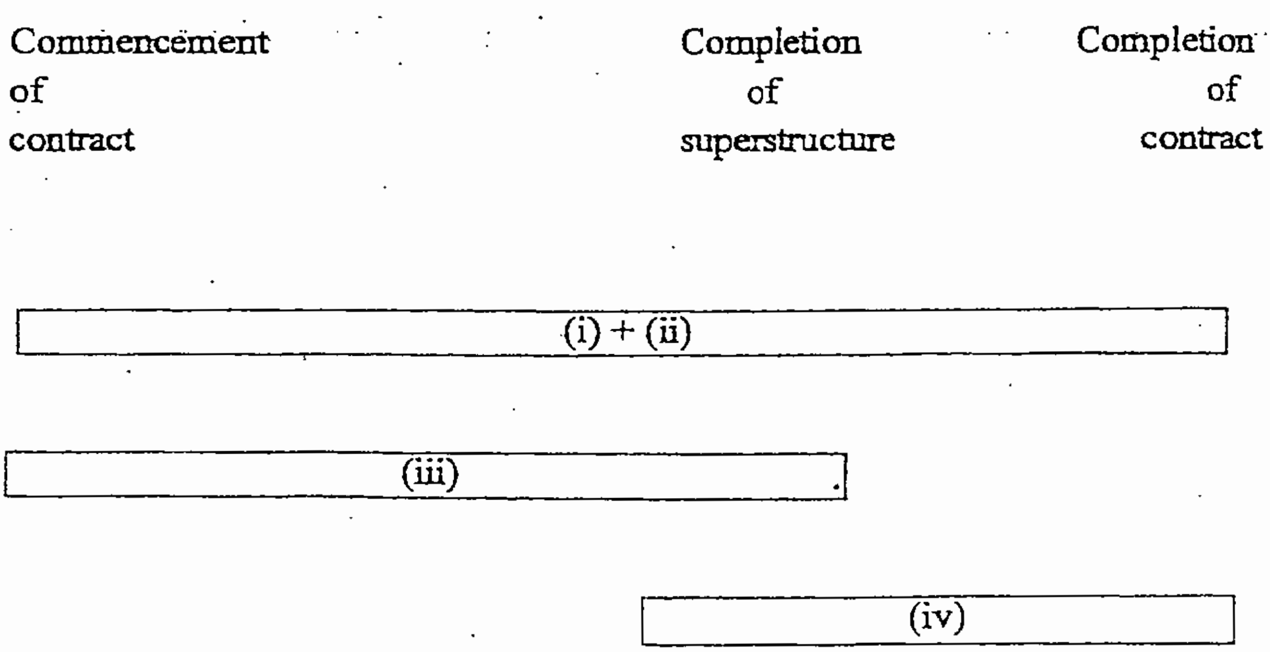
Preferred Manning Scales

- 1 CSE to 4 SSEs
- 1 SSE to 4 PSEs/PREs
- Each PSE/PRE is responsible for 1 WP

<u>Appendix 2</u>

**Proposed Strength of Building Site Staff Resource for a Typical Building Contract**

| Proposed Strength | Responsibilities |
|---|---|
| (i) 1 COW | Key assistance for PRE. Oversee all ACWs and WSs |
| (ii) 1 ACW + WSs if required | Co-ordination works and miscellaneous site inspection |
| (iii) 1 ACW or WS per block | Dedicated for inspection of structural engineering works |
| (iv) ACW and/or WS | For inspection of architectural works |



31 March, 2000

**Feedback on the**
**Quality Housing Consultative Document**

Thank you for your invitation for staff feedback on Quality Housing Consultative Document on several occasions in the past two months. We see that staff have an important role in the drive for quality housing and welcome these more frequent and cordial communications between the Authority, the department and staff associations.

While there are still several major comments which we would wish to make, we appreciate the effort of the Authority and the department in putting up the quality consultative document which is comprehensive and pointing generally to the right direction in the long term. We also appreciate that many of our previous suggestions have been reflected in the recommendations put forward in the document.

The major comments that we wish to highlight are:

i. Partnering should not be over-emphasized at this point in time. We consider that in the long term, there should be a balance between monitoring and trust on our industry counterparts. However, in the short term, given the deficiencies found in last year in both private and public development, we must strengthen the monitoring and control on housing development. This will have major implications on the requirements for staff resources. In order that we can work productively and efficiently, existing monitoring and control system must be enhanced to make our industry counterparts perform and do things right at the first time.

ii. Priorities must be set to address the key issues first. Too many initiatives have been included in the document and it would be disastrous if resources are taken away from production teams to address all initiatives at the same time. There are urgent needs, for example, to review the manning scales of production teams, particularly those of structural engineers, and to deploy adequate and experienced team of resident engineers and site inspectorate staff, for the monitoring of structural engineering works. Contrary to what [redacted] has said in the public, even the deployment of resident engineers has not been satisfactorily accomplished to-date because of the shortage of adequate and experienced personnel.

iii. The document fails to recognize the inadequacy of staff resource at all levels as one of the main causes of the failure of the department to prevent the quality problems. It should be realized that the total cost of construction undertaken by the department is comparable to that undertaken by all Works departments together. However, the staff resources of the department at all levels are very much less than that of their counterparts in all Works departments in total. Please also refer to our letter of 3 December, 1999 in the same series.

iv. Works Bureau is headed by Secretary for Works who is an engineer by profession. Works departments are headed by directors who are all works professionals and are mostly engineers. In contrast, both Housing Bureau and Housing Department are headed by Administrative Officers. The highest rank officer looking after construction in Housing Department is Deputy Director/Works and the highest rank officers looking after engineering works are chief engineers only. This has, in our opinion, resulted in grossly inadequate participation by works professionals, engineers in particular, in policymaking and crisis management for housing development, and inadequate accruing and sharing of professional knowledge and experience. There is a need to strengthen the professional organization of the department significantly.

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v. Job security and a clear career path are the most important elements to attract and retain talents and thereby engender staff commitment in the pursuit of the quality reform. However, the job security and career path of most staff of the department, including structural engineers, whether they work in Development and Construction Branch or other branches of the department, are currently threatened by the Greater Private Sector Involvement (PSI) in the management and maintenance of public housing estate. The anxiety arising from PSI must be addressed. The Authority should at least urge the Government to give staff a written assurance for their continued employment.

vi. The putting of Housing construction under the control of the Buildings Ordinance is not a real solution for addressing the quality issues found as equally serious quality problems have actually been found in many building projects under the control of Buildings Ordinance. It is neither the most efficient and effective way to address the specific need of the Authority in achieving the qualities and quantities required for housing production. We opine that the more efficient and effective way is to review and reinforce the department's quality system.

vii. For the interim, we consider it necessary to put something in place immediately to address the community's expectation that there should be an objective third-party scrutiny on housing projects. We do not agree with the proposal in paragraph 5.9 of the Consultative Document for the strengthening of internal audits as they focus mainly on internal performance instead of that of the project as a whole and that of contractors, and are widely perceived by staff as fault finding. Even worst, audits will often mean corrective actions rather than preventive actions. We would reiterate our previous proposal for the setting up of a building control office within the department, independent of D&C Branch, for the immediate implementation of some stage by stage building control on housing projects to ensure that each stage of housing development will be completed satisfactorily before consent is given to proceed with the following stage.

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Other detailed comments on the Quality Housing Consultative Document and suggestions, including that for quality monitoring, site supervision and departmental reform, etc., are given in the Appendix. We sincerely hope that our comments and suggestions would help the Authority and the department in drawing up a strategy for a quantum improvement of the quality of housing construction and for restoring the confidence of the public.

c.c. ]

## Hong Kong Housing Department Structural Engineers Association
## Other Detailed Feedback on the Quality Housing Consultative Document

Chapter 2: Problems Perceived

Perspective of the Community

2.6 In the comparison of private residential construction cost, it should be noted that most residential buildings in Hong Kong are high-rise blocks constructed on congested sites. This may account for the higher costs.

Chapter 4: Building up a Partnering Framework

Commitment

4.4(b) For practical reasons, we suggest that foundation stones are to register the names of firms involved in the project only. For works undertaken by the department, 'Development and Construction Branch, Housing Department' should be registered.

Feedback and Communication

4.12 The stepping up of feedback from end-users is fully supported. This will enable areas causing most complaint to be dealt with although they may not be serious from a professional/technical point of view, e.g. cracks and spalling.

Tendering

4.21 We support the greater emphasis on performance and technical capability in the selection of consultants. We would like to comment that:

i. a study by consultants pointed out that under the two-envelope system of the department, raising the ratio from 50:50 to 70:30 would not significantly alter the outcome. Hence, we suggest that the proposed change in weighting should be further reviewed;

ii. there is no specific proposal for complex projects.

In addition, there should be a checking system to see what resources committed by consultants in their proposal will actually be injected in projects during the execution of consultancy agreements.

Chapter 5: Assuring Product Quality

Quality Monitoring

5.5. As regards the quality of construction works, it is of primary importance that contractors will perform and do things right at the first time. Monitoring and control by the department should only be supplementary. This is the only way that the department could work productively and efficiently. Apart from the proposal for requiring contractors to submit Quality Supervision Plans, provisions in construction contracts should be strengthened so that Contract Managers and contract teams could more readily reward or penalize contractors or their key personnel for their performance/non-performance under the contracts. The Housing Authority and the top management of the department must fully support, and be seen to fully support, Contract Managers and contract teams, and must not interfere with decisions made by Contract Managers under the contracts.

Site Supervision

5.6(a)(i) Resident engineers should be deployed to all piling projects and to large scale or complicated building projects, e.g. those with three or more standard blocks or those with non-standard buildings. These resident engineers must be experienced and are fully supported by senior and chief project or resident engineers under a reasonable manning scale.

5.6(a)(ii) There must be dedicated site staff for structural engineering works for both piling and building contracts to ensure adequate attention on structural engineering works and to enable knowledge and experience to be accrued. More site staff should be deployed to site with higher risk such as site with difficult underground geological condition.

5.6(b) For consultant projects, resident engineers and engineering site staff for piling contracts and structural engineering works of building contracts should be permanent or contract employee of structural engineering consultants. This will help to ensure that these resident engineers and site staff will have adequate knowledge and appropriate experience, and are well supported by their head office.

5.6(c) Qualified site supervisory personnel, e.g. Quality Control Engineer, should be required to resident full time on site.

After Sales Services

5.10 Paragraph 5.10 to 5.13 should be put under a heading entitled 'After Sales Services'. Some proposals for enhancement of the maintenance services should also be added.

Chapter 6: Investing in a Professional Workforce

6.3 Investment in a professional workforce within the department is equally important. The department should promote a learning organization, encourage and provide more opportunities for continuous professional development. Overseas training will be useful in keeping staff abreast of the state of the art development in construction technologies world-wide.

Chapter 7: Striving for Productivity and Efficiency

Integrated Production Process

7.5(a) It is not an appropriate time to launch a pilot "design-and-build" building project given the current status of the industry. There is still a great need to rely on the conventional 'Client – Contract Manager – Contractor' relationship to ensure prudent application of housing funds, to ensure value for money and to protect the interests of the client.

7.5(g) We strongly advocate the direct appointment of specialist consultant so as to ensure unbiased project decisions and to protect the best interests of the client. We consider that the management of consultants, including specialist consultants, is part of project management, and must be taken up by project managers. The so called 'one-stop service' under the architect-led consultant approach is actually a reflection of the department's reluctance to take up full project management responsibilities in the past, leaving them to the architectural consultant, and hence not protecting the best interests of the client.

Construction Period and Costs

7.10 The Document proposes to increase construction periods of piling and building contracts simply by one and two months respectively. This may be inadequate given the additional tests proposed on piling works. We would add that the construction period should also be related to the scale and complexity of the projects.

In addition, we consider that there is a need to provide a clear and longer period for structural engineering design, particularly for non-standard development. In the past, time for structural engineering design was often eaten up by time for change of design. There is a need for the enhancement of project management to contain design changes and to ensure a fair share of time for design by all disciplines.

Departmental Reform

7.13 (i) The reform of D&CB should be considered together with that for the department and the Authority. Decision-making at the top end of the organization as a whole is badly in need of streamlining. We find that there are seven levels for making policy on housing projects, namely Strategic Planning Committee, Building Committee, Chairman of Housing Authority, Director of Housing, Deputy Director of Housing, Business Director and Project Director, not to mention Heads of Branch Meeting and Development & Construction Management Board. All these levels are not responsible for professional matters.

(ii) On the contrary, the existing three-tier structure of professionals, namely Chief, Senior and Professional may be too lean an organization for ensuring the delivery of prudent and quality professional service. Given the scale of housing development, the cost of which is comparable to all works undertaken by the Works Bureau, there is a need for much stronger professional organizations in order that professional knowledge and experience could be accrued and shared, and relevant professionals have adequate participation in policy making for housing development.

(iii) To promote stronger professional organizations, and more productive and efficient contract management, it is not appropriate to put professional organizations under project management functions. Professional and project management functions should be separate and integrated under a matrix organization. It should also be clarified that the project management functions are responsible for controlling time, cost and quality in the capacity of a client's representative only. It is not responsible for scrutinizing professional and technical standards, which is the responsibility of the proposed regulatory function. Neither should project management functions interfere with decisions of professional functions under the contracts. Contract Managers' decisions should be final under the contracts.

(iv) To meet the public expectation of third-party scrutiny of housing projects, the regulatory function should be independent of Development & Construction Branch.

(v) The staff resource for strengthening of site inspection teams and for establishing the regulatory function should be acquired and not taken from production teams, which are already suffering inadequacy of resources.

(vi) Apart from the streamlining of decision making, the streamlining of operational procedures, setting of priorities and reduction of paper works are essential in the striving for productivity and efficiency. This seems to have been completely missing in the Document.

Chapter 8: Addressing Existing Public Concerns

Piling Works

8.3 (d) We question the need for engaging independent consultants to witness and endorse final acceptance tests at the end of piling contracts. These works could well be taken up by in-house engineers as part of the proposed regulatory function.

8.3 (e) We question the need and appropriateness of the proposed audits on piling works as a routine in the long term. Any findings from such audits will be too late and will mean corrective actions and further damage to the confidence of the public. We would strongly reiterate our proposal for implementing stage-by-stage building control in a preventive manner, i.e. the construction should be allowed to proceed to a following stage only upon satisfactory completion of the preceding stage.

Industry Ethical Integrity

8.5 Upholding the industry's ethical integrity applies to all construction stages instead of the piling stage only. This paragraph should therefore be put under a separate heading.

Production Peak

8.8 (b) Contracting out final inspection should only be a stopgap measure to address the current peak production. Final inspection should normally rest with department's staff for in-house projects. It should not be described as a means to enhance the independence and objectiveness of such inspection.

HONG KONG HOUSING DEPARTMENT
STRUCTURAL ENGINEERS ASSOCIATION

香港房屋署
結構工程師協會

[redacted]

## 沙田圓洲角地基問題調查小組報告

行政長官，相信　閣下有留意到本會和房署其他八個工務專業協會、本地高級公務員協會、政府非海外土木工程師協會和其它五個政府部門的專業協會，在六月十五日所發表的致全港市民公開信（附件一）。我們對調查小組報告書調查不全面、內容不客觀及漠視問題癥結，感到非常失望。本會亦曾就報告書向房委會作出回應，詳情請參閱附件二。

我們認爲報告書對以下兩個關鍵問題全完忽視：

（一）　房署不合理的工程監督制度，詳情見附件三；

（二）　房署根本沒有足夠人手應付三倍於平常的建屋量，詳情請參閱附四件及五。

房屋局所委任的「天頌苑及圓洲角事件員工紀律調查小組」，職權範圍較施德倫小組更爲狹窄，成員職級僅在首長級第五級和第一級，根本不會觸及上述的關鍵問題，房委會和應負責的高層人仕。

因此我們強烈要求：

（一）　將事件交由立法會所成立的專責委員會作公平、公正及全面的調查，

（二）　在事件真相未弄清楚前，政府不應草率進行紀律程序，上述的紀律調查小組應即時停止工作，

（三）　馬上檢討和改善房署工程監督制度和增加人手，以確保公屋的質素。本會早於一九九六年所提的改善建議，詳情見附件六。

以上的要求乃大部分政府專業協會的共識，有助挽回工程專業職系的士氣，相信是符合社會整體的利益，懇請行政長官　閣下接納。

二零零零年六月二十二日

附件一：就圓洲角地基問題調查小組報告致全港市民公開信
附件二：香港房屋署結構工程師協會就圓洲角地基工程問題報告書的回應
附件三：房屋署地盤監督隊伍與項目工程師的關係及與土木工程的比較
附件四：房屋署和工務部門工程開支及專業職系人數比較
附件五：房屋署地基工程合約數目及總值
附件六：香港房屋署結構工程師協會一九九六年具體改善建議

HOUSING AUTHORITY HEADQUARTERS BUILDING, 33 FAT KWONG STREET, HOMANTIN, KOWLOON
九龍何文田佛光街三十三號房屋委員會總辦事處大廈

附件一：

就圓洲角地基問題調查小組報告致全港市民公開信

## 就圓洲角地基問題調查小組報告

## 致全港市民公開信

我們，包括房署九個工務專業協會、本地高級公務員協會、政府非海外土木工程師協會和其它五個政府部門的專業協會，對沙田圓州角調查小組報告書，調查不全面、內容不客觀及漠視問題癥結，感到非常失望。報告書祇描述事件發生經過而不提當時工程師身處的客觀環境，對於房署不合理的工程監督制度和根本沒有足夠人手應付三倍於平常建屋量這兩個關鍵問題完全忽略，給公眾一個錯覺，以爲責任全在員工身上。

房屋委員會在有關人士未有機會回應前，全面公佈報告書內容，對四名房署工程師點名批評，此舉把公眾的焦點，引導到他們的身上，對他們本人、家人及整個房署的工務專業人員帶來嚴重的傷害。在政府任職的專業人士對此均極表關注。報告書的內容和房屋委員會的處理手法，令大部分政府專業協會對事件是否會得到公平處理完全失卻信心。

因此，我們強烈要求，將事件交由立法會所成立的專責委員會作公平、公正及全面的調查。把整個事故的基本原因向全港市民作出交代。在事件真相未弄清楚前，政府不應草率進行紀律程序。

我們同時要求房屋委員會和房屋署，馬上檢討和改善工程監督制度和增加人手，以確保公屋的質素。

香港房屋署結構工程師協會
房屋署土力工程師協會
房屋署建築師協會
房屋署屋宇裝備工程師協會
房屋署土木工程師協會
房屋署園林建築師協會
房屋署保養測量師協會
房屋署規劃師協會
房屋署工料測量師協會

本地高級公務員協會
政府非海外土木工程師協會
政府水務專業人員協會
土木工程署本地土力工程師協會
屋宇署結構工程師協會
建築署結構工程師協會
機電工程署本地工程師協會

二零零零年六月十五日

附件二：

香港房屋署結構工程師協會就圓洲角地基工程問題報告書的回應

HONG KONG HOUSING DEPARTMENT
STRUCTURAL ENGINEERS ASSOCIATION

香港房屋署
結構工程師協會

Our Ref. SEA/8

5 June, 2000

Dear [redacted],

**Response to the Report of the Investigation Panel On Accountability**
**(Piling Contract 166/1997 – Shatin 14B Phase 2)**

On 31st May, 2000, nine professional staff associations of Housing Department made a joint declaration expressing their dissatisfaction with the way that the Authority and the Department had handled the report of the Investigation Panel. The joint declaration was published in three Chinese newspapers. A copy of the declaration is enclosed in Appendix 1.

During the past few days, our Association has contacted the two members of our association who had been involved in the above project and listened to their views on the report. Once again, the Association concludes that the main cause of the problems in the above project was the failure of the system under which the project had been executed. It was not due mainly to the failure of individual personnel as the report may have impressed the public. The Association considers that the criticisms in the report on [redacted], Project Engineer and on Structural Engineering units, are not justified because firstly, the criticisms have not been presented in the context of the unsatisfactory system under which [redacted] had to operate, and secondly, the Investigation Panel did not understand the operation of the department accurately and fully.

The criticisms on [redacted] and Structural Engineering units, which are not justified as described above and published without deliberation by the Authority, the Department and all parties concerned, have damaged seriously the image and morale of [redacted], Structural Engineering units and all the staff of the Department. Our Association feels that it has a responsibility to give further response to the report.

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In view of the disciplinary proceedings that may follow, the Association does not consider it appropriate to go through all the points in the report about the [redacted] and [redacted] Units at this stage, nor to comment on accountability of individuals. However, to illustrate what the Association considers as unfair, we would like to comment on the following specific points:

(i) At the end of page 6 and in Appendix 2.6 of the report, the number of site visits carried out by [redacted], [redacted] and [redacted] are described. The number of site visits carried out by them were perhaps not as desirable as that should have been if chief resident engineer, senior resident engineer and resident engineer had been deployed as in most civil engineering projects. They were however in no way less than the average as compared with similar housing projects and private sector building projects, given the number of projects each of the above personnel was responsible for.

However, in the first paragraph of page 7, the report states that [redacted] was involved in practically none of the inspections required of him by HD Site Inspection Manual but signed all the certificates required of him after the event at HD Headquarters. On the contrary, [redacted] has shown the Association records in the site diary of his inspections of rock cores samples and borelogs, the most important inspection for bore piles, and of other inspections in office files.

Furthermore, we wish to point out that [redacted] and [redacted] is not normally involved in those routine inspections which do not require professional judgement. [redacted] and [redacted] normally inspects the site generally to see that the quality standard of works are maintained and understood by both his own site staff and the contractor. It is a usual practice for [redacted] and [redacted] to signify their consent to proceed on inspection forms afterwards.

Therefore, the criticisms on page 7 of [redacted] are unfounded and criticism 1 c) of Housing Department culture on page 8 that staff directly responsible for construction quality spend most of their time at a desk in HD Headquarters is **misleading, and has caused the most serious damage to the image of the staff of the department.**

…../3

(ii) One of the major difficulties that staff of the department, has been facing, structural engineers in particular, is the inadequate staff resource and the unduly heavy workload at all levels. This is the main cause why [redacted], [redacted] and could not have visited the site more frequently. We do not agree with the report that the span of control of [redacted] and [redacted] was reasonable. We also question why the report has not remarked on the excessive workload of . The manning ratio of CSE:SSE:SE has already been the subject of discussion between our Association and the top management of the department for many years. Our Association has pointed out that the manning ratio in the SE sections is among the worst in the department and is also the worst when compared with other Works Departments. Our Association has suggested that the preferable number of normal projects that should be undertaken by a PE, SSE and CSE should be two, eight and thirty-two respectively. Less number of projects should be handled by individual if the projects are complicated or of very large scale. However, to-date, neither the Authority nor the Department has recognized staff difficulties and agreed with our suggestion raised time and again. We understand that the total contract sum of housing projects is actually more than that of the whole of Works Bureau. We believe that a simple comparison of heads at all levels with the total number in works departments will show how seriously the department has been under staffed.

Criticism 1 a) on the department culture on page 8 of the report that paper is more important than substance **is misleading.** The phenomenon is, in our view, the consequence of excessive workload and system requirements rather than the culture of staff.

(iii) On the criticism that the [redacted] was unaware of the use 'supermud', we wish to point out that 'supermud' is not specified in housing projects and most structural engineers in the department, including the undersigned, has never heard of, nor seen the material before. On the criticism that the [redacted] did not take further action on persistent working by the contractor over 7:00 p.m., we wish to point out that this was the prevailing situation during 1998, i.e. a system wide deficiency at that time.

...../4

As regards the improvement proposals at the end of the report by the Investigation Panel, which are all related to system, we agree with all of them in principle except that we opine that a project engineer should not undertake more than two active projects. Proposal 9 on page 14 refers. In particular, we fully support the establishment of resident engineers and dedicated site staff for structural engineering w[redacted]uding the rationalization of the line of reporting, not only for piling contracts, but for building contracts as well. We also welcome the suggestions for the greater focus on project management and the simplification of manuals, etc., all of which are in line with previous proposals by the Association to the Department.

We would also highlight our support for the proposal to amend Housing Ordinance. Proposal 7 refers. We suggest that this proposal should be further explored. **There has been a misconception that the current quality problems of housing projects could be resolved by transferring the building control of housing projects from Housing Department to Buildings Department.** First of all, until the end of last year, there is practically no process of building control on housing projects that is equivalent to that on private projects by Buildings Department and therefore there is no such thing as transfer from Housing Department to Buildings Department. Building control on housing projects, if implemented, is an additional step in the process. The proposal would simply mean that the additional step on building control would be undertaken within Housing Department instead of by Buildings Department. Secondly, under the Building Ordinance, the responsibility for the quality of private projects rests with Authorized Persons and Registered Structural Engineers. Buildings Department is responsible for checking that the private development complies with Building Ordinance, but not for the quality of private development. The vetting by Buildings Department is predominantly record checks for project at construction stage. Thirdly, Development and Construction Branch of Housing Department is actually providing a professional service to the Housing Authority currently, like other consultants, not as a building control authority. Architects and Structural Engineers in the department are responsible for the quality of housing projects like Authorized Persons and Registered Structural Engineers for private development under Building Ordinance. In order to improve the quality of housing projects, the quality system of Development and Construction Branch must be improved. To let Buildings Department to undertake the additional step on building control will not solve the quality problem of housing projects. If the

proposal is implemented, a separate office should be set up independent of D&C Branch, to implement the building control under the amended Housing Ordinance.

In summary, while we consider that cause of the problems in the piling contract was mainly due to the failure of the system under which the contract had been executed, the report has unfairly impressed the public that the cause was mainly due to failure of individuals to perform. The criticisms on [redacted] and Structural Engineering units are particularly not justified, and have damaged seriously the image of all the staff of the Department. This is particularly so when the report was made public before any of the staff members was informed and given the chance to comment on it. We request that the Housing Authority should carefully consider the responses by [redacted] and our Association, review the findings of the investigation panel, and make necessary clarification with the general public. On the other hand, the Association supports in principle the improvement proposals for the system by the Investigation Panel at the end of the report.

Yours sincerely,

c.c. Director of Housing

（廣告）

# 房屋署工務專業協會聯合聲明

我們對於房委會及房署處理圓洲角愉翠苑地基問題調查小組報告之手法極表不滿，特此作出以下聲明：

(一) **公佈手法不當** — 房委會及房署一方面聲稱祇是剛收到報告，需要研究和考慮，兩星期後再決定是否接納，但在另一方面卻於當事人對報告內容沒有機會回應的情況下向外公開。這做法足以造成公眾審判，對當事人的聲譽及其家人造成困擾而引致無可挽回的傷害。

(二) **報告不全面** — 房委會為調查小組訂下的局限性工作範圍，使報告未能指出政策、制度及部門運作上的錯誤和掣肘。同時，該報告顯示調查小組對房署的運作未有充份和正確的理解。

(三) **調查欠公允** — 報告祇記錄事情發生的經過而未有對背後原因作出深入的探討，以至忽略與事件有關的重要環境因素。近年我們面對龐大的建屋量，例如本年度落成單位預計為九萬多，致使各職系的工作量大增。在工程監管上，署方未能以足夠資源及專才，例如增設駐地盤工程師，來配合龐大的增產量。報告未能指出問題所在及考慮其對當事人工作的影響，實屬不公。

(四) **漠視問題癥結** — 報告提出的一些改善建議，其實有關工會早於多年前已向署方提出。可惜署方一直充耳不聞，到現在各宗事故發生後才倉卒作出應變措施。署方過往漠視我們專業工會的意見，現在卻草率地將責任全推在個別員工身上，實對當事人極不公平。

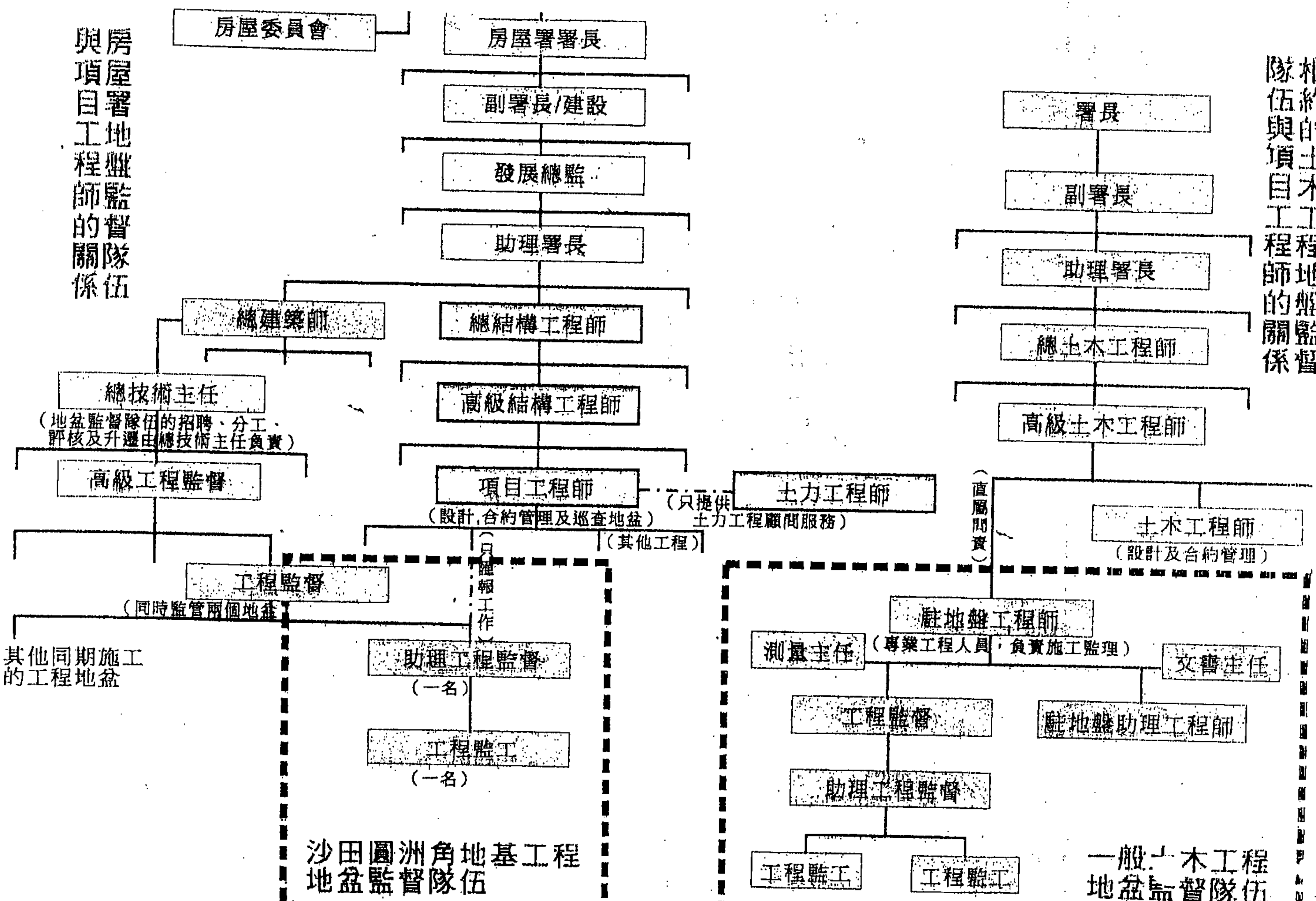
我們在資源極度短缺的情況下，於各種不合理制度的規範下，仍努力不懈地工作，為市民服務。現卻面對房委會及房署不公平的對待，士氣被嚴重打擊，我們深表不滿和遺憾。

房屋署建築師協會
房屋署土力工程師協會
房屋署規劃師協會
房屋署屋宇裝備工程師協會
房屋署園林建築師協會
房屋署工料測量師協會
房屋署土木工程師協會
房屋署保養測量師協會
香港房屋署結構工程師協會

二零零零年五月三十一日

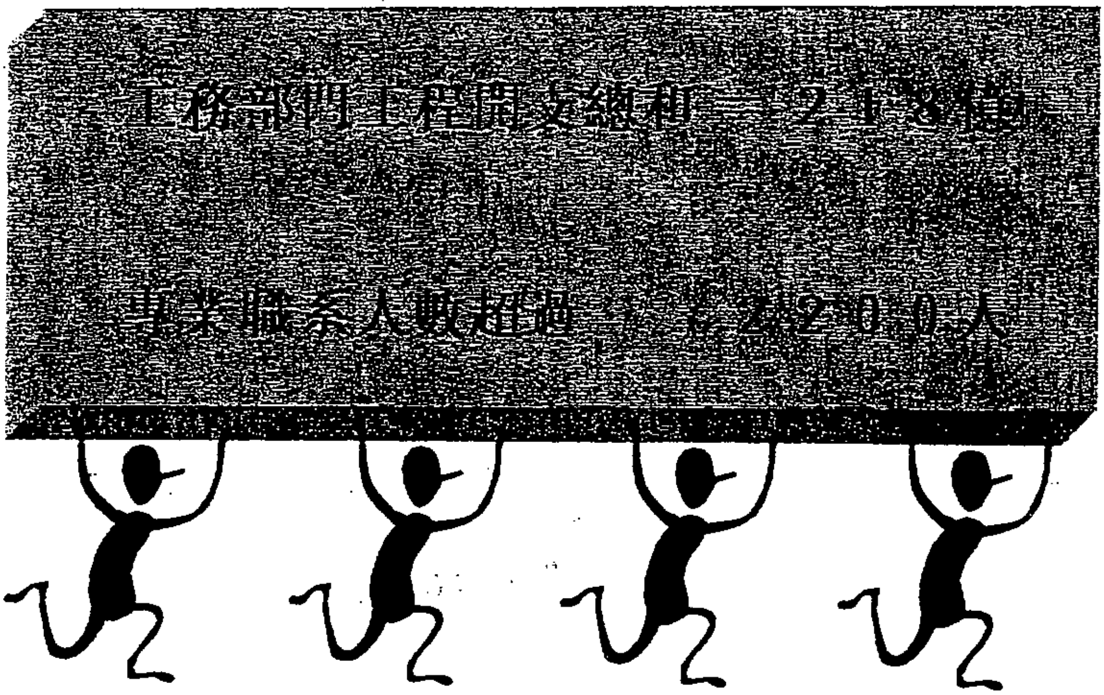
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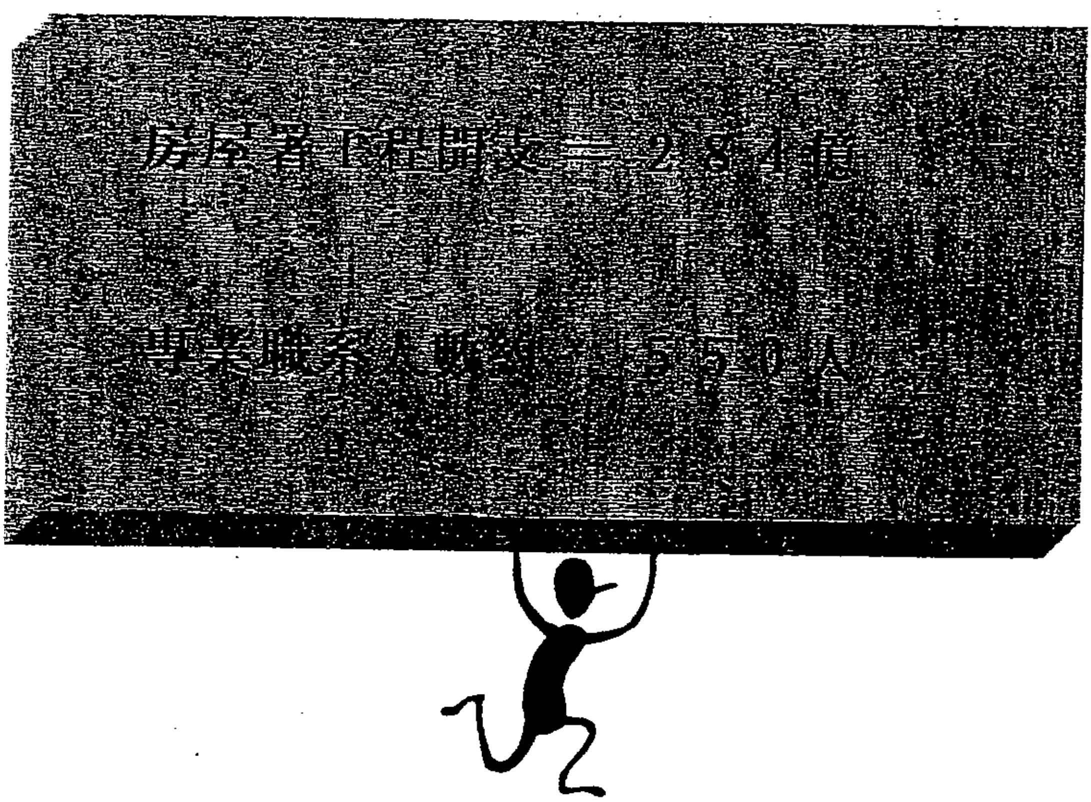
房屋署地盤監督隊伍與項目工程師的關係及與土木工程的比較


房屋署地盤監督隊伍與項目工程師的關係
房屋委員會
房屋署署長
副署長/建設
發展總監
助理署長
總建築師
總結構工程師
總技術主任
（地盆監督隊伍的招聘、分工、評核及升遷由總技術主任負責）
高級結構工程師
高級工程監督
項目工程師
（設計,合約管理及巡查地盆）
土力工程師
（只提供土力工程顧問服務）
（其他工程）
（只匯報工作）
工程監督
（同時監管兩個地盆）
其他同期施工的工程地盆
助理工程監督
（一名）
工程監工
（一名）
沙田圓洲角地基工程地盆監督隊伍
相約的土木工程地盤監督隊伍與項目工程師的關係
署長
副署長
助理署長
總土木工程師
高級土木工程師
（直屬問責）
土木工程師
（設計及合約管理）
駐地盤工程師
（專業工程人員，負責施工監理）
測量主任
文書主任
工程監督
駐地盤助理工程師
助理工程監督
工程監工
工程監工
一般土木工程地盆監督隊伍

附件四：

房屋署和工務部門工程開支及專業職系人數比較

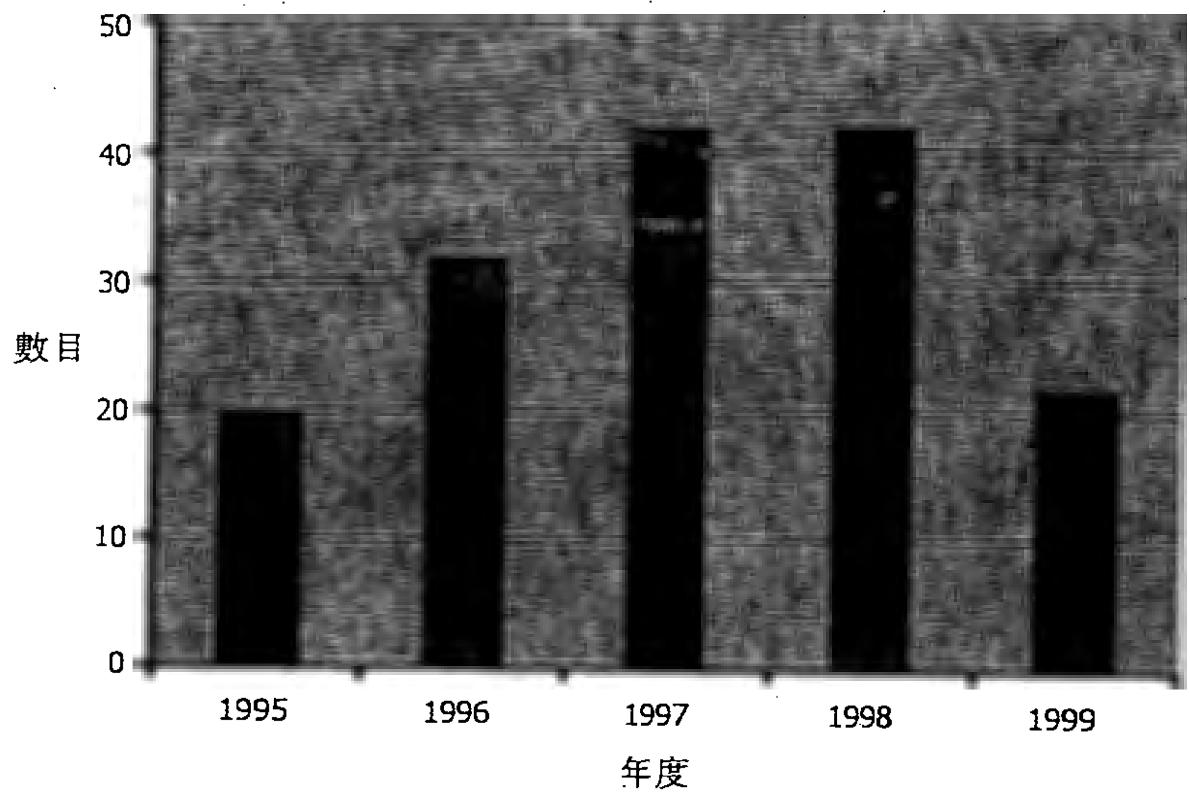

工務部門工程開支總和 = 218億
專業職系人數超過 2200人


房屋署工程開支 = 284億
專業職系人數 550人

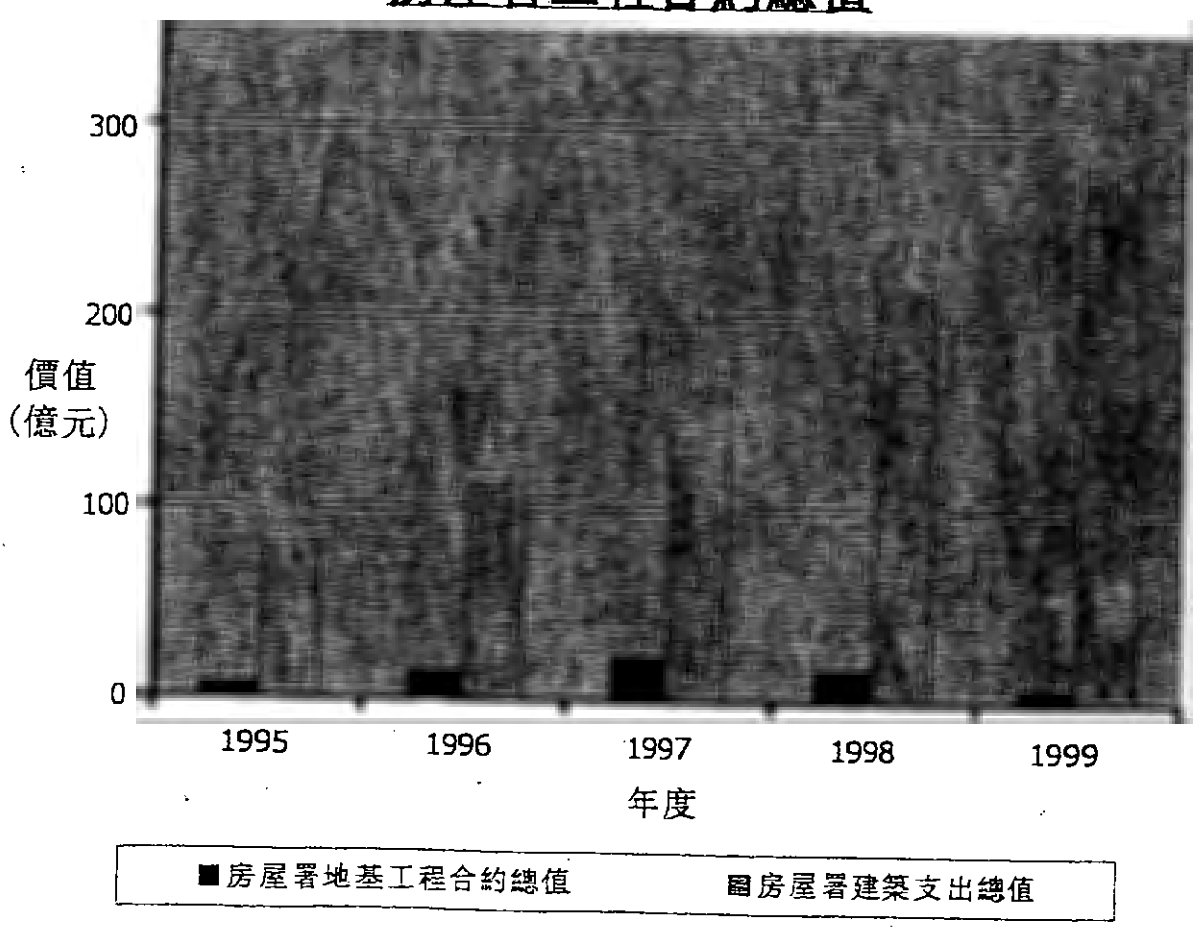
附件五：

房屋署地基工程合約數目及總值

# 房屋署地基工程合約數目




# 房屋署工程合約總值



附件六：

香港房屋署結構工程師協會一九九六年具體改善建議

HONG KONG HOUSING DEPARTMENT
STRUCTURAL ENGINEERS ASSOCIATION

HOUSING AUTHORITY HEADQUARTERS BUILDING
33, FAT KWONG STREET, HOMANTIN, KOWLOON

香港房屋署
結構工程師協會
九龍何文田佛光街三十三號
房屋委員會總部辦事處大廈

26 April 1996

Further to our letter on 12 April 1996 expressing willingness to contribute to the re-engineering study, we enclose herewith a copy of our improvement proposal to Coopers and Lybrand on 26 April 1996 for your perusal.

We will forward further comments on findings and recommendations by the management consultant upon receipt of their study reports.

# IMPROVEMENT PROPOSALS FROM HKHDSEA

| PROPOSAL | CURRENT PROBLEMS | BENEFITS FROM ADOPTING PROPOSAL |
|---|---|---|
| **Dedicated Project Management Function, detached from Design Function**<br>• Project management as a separate function from design and PM report directly to SAD/ND or DD/HMW.<br>• Dedicated PM open to all disciplines.<br>• Align with practice in private sector, Housing Society, MTRC and Airport Core Projects. | • Role confusion as PM & DTL are the same person leading to ineffective project management.<br>• Inadequate process control resulted in compressed programme for detailed design and preparation of tender documents.<br>• Inadequate change and cost control. | • **Enhance effectiveness**<br>– Enhance resource utilisation by opening PM to pool of talents from various disciplines who have the management calibre to perform PM role competently.<br>– Ensure effective process control, change control and cost control.<br>– Be more task-focus.<br>• **Maintain accountability**<br>– Maintain accountability by holding PM responsible directly to DD/HMW or SAD/ND.<br>• **Treasure ability**<br>– Select the best according to management calibre rather than profession.<br>• **Value equity & enhance team spirit**<br>– Open the PM post to every discipline contributing to the success of a project. |
| **Vetting Strategy for Consultant Designs**<br>• Establish extent of technical vetting that addresses Buildings Department' concern on compliance with statutory & safety requirements.<br>• Multi-disciplinary set-up to reflect nature of the work. | • Consultant management comprising project management role & vetting role.<br>• Unclear directives on extent of technical vetting required.<br>• HD exempted from Building Authority submission but the public expect similar standards adopted by HD especially on statutory & safety requirements | • **Avoid double standard as compared with private sector**<br>– Answerable to public challenge.<br>• **Ensure full compliance with Client's requirements & other statutory requirements**<br>– Implement a vetting system by tailoring the one executed by the Buildings Department to only essential areas.<br>– Involve all professional disciplines in the checking.<br>• **Maintain high quality & cost-effectiveness**<br>– Encourage consultant to prepare quality designs to pass the vetting process.<br>– Avoid getting away with uneconomical designs that jeopardize the Client's interest. |
| **Establishment of Resident Engineer (RE) System**<br>• Properly establish RE system.<br>• RE system well established for major projects in private sector. | • Project officers spent time on non-value-added activities such as travelling between remote site and design office.<br>• Substantial production from remote areas such as Tin Shui Wai and Tseung Kwan O in the coming years<br>• More sites with foundation difficulties | • **Increase cost-effectiveness & efficiency**<br>– Save transportation time & cost for PSE & other project team members to and from remote sites (now, approx. 50% projects on remote sites)<br>– Provide professional, effective input on site as demanded by complex projects (now ~40%)<br>– Enable effective communication among supervisory team & with the contractor<br>– Facilitate efficient communication of more-than-textual messages.<br>• **Streamline site operations**<br>– Respond interactively, timely to obstacles arising on site.<br>– On the spot decisions eliminate disruption to construction programme due to waiting for office decision.<br>– Arrange site inspections to match & facilitate the site works.<br>• **Enhance team spirit**<br>– RE who avails himself to help the contractor promotes their cooperation & partnership.<br>– Foster mutual backup & strengthen the cohesiveness of the supervisory team.<br>• **Gain contractor's full support**<br>- Availability of RE to help solving site problems gain contractor's full support. |

| PROPOSAL | CURRENT PROBLEMS | BENEFITS FROM ADOPTING PROPOSAL |
|---|---|---|
| **Setting up Dedicated Site Staff for Engineering Works**<br>• Form a pool of dedicated site staff for engineering works (based on existing civil engineering site staff & some from building works) | • Current deployment of site staff for foundation contract in about every 3 years and a demolition contract in less frequent interval does not encourage the formation of a 'learning' site supervision team.<br>• Engineering works involve safety or unforeseen ground condition elements that have to be carefully dealt with. | • **Ensure efficient & effective supervision**<br>– Accrue experience from continually working on similar field.<br>– Gain efficiency & effectiveness from specialization.<br>• **Provide prompt response to major site concerns**<br>– Respond promptly to safety problems & unforeseen ground conditions.<br>• **Remove bias in staff performance**<br>– Eliminate the tilted emphasis on performance in supervision of building works.<br>– Lead to proper recognition of performance in supervision of engineering works.<br>– Upgrade the quality of supervision.<br>• **Enable effective staff control , deployment & training**<br>– Contract Managers of engineering contracts appraise and select the most suitable candidates for the right jobs.<br>– Bring in efficient & effective training as the training needs (short & long term) are identifiable and the training experience is valuable for the staff career development. |
| **Formation of Specialized Structural Design Teams for Non-Standard Buildings & Structures**<br>• Establish specialized design team.<br>• Establish workload indicator for resource planning.<br>• Such practice common in consultant firms. | • Increase in number , variety & complexity of non-standard buildings due to various development constraints<br>• No proper workload indicator for resource planning to address high volume of design and liaison work required | • **Better use of design expertise in efficient & effective design**<br>– Increase efficiency & effectiveness from specialization.<br>– Improve on aspect of economy in design.<br>• **Cope with large number & variety of non-standard designs**<br>– There are a total of 88 nos. non-standard buildings or structures under design & 25 under planning.<br>– There are a wide variety of non-standard buildings or structures.<br>• **Cultivate cross-fertilization of knowledge**<br>– Accrue learnings from a design, apply & improve similar types of design.<br>– Establish valuable design data bank for future reference.<br>• **Maintain consistency in design approach** |

**The Government Local Civil Engineers Association**
P.O. Box 28515, Gloucester Road Post Office, Wan Chai, Hong Kong.
Tel. No. : 21742666/21742679 Fax No. : 26289060

21 August 2000

**Direct Investigation into Management of Construction**
**<u>Projects by the Housing Authority and Housing Department</u>**

We refer to your letter dated 28.6.2000 ref. (16) in OMB/WP/14/1 S.F. 86 concerning the above.

We have solicited views from LegCo candidates (Engineering Functional Constituency) and contacted some of our members who are engineers working in the Housing Department. Based upon their **own experience**, a proposal to **tackle** the root of the problem has been made and is attached herewith for your perusal. In short, it is proposed that :-

- Housing Department to be put under the administration of the Works Bureau. This is line with the view proposed by the Hong Kong Institution of Engineers to the LegCo Housing Panel; and
- Hong Kong Housing Authority should only be responsible for housing policy and management. A new department should be set up for public housing construction.

Please feel free to contact us should you have any queries and/or require further clarification. Thank you for your attention.

[redacted]

# *Housing Department*

# *Proposed Reform*

<u>**Contents**</u>

1. Executive Summary

2. Existing Organization Problems

3. Proposals for Improvements

4. Benefits

5. Conclusion

6. Way Forward

Annex A : Comparison of Annual Capital Expenditure and Directorate Structure between Housing Department and Works Group of Departments.

Annex B : Proposed Re-organization Chart

## 1. Executive Summary

1.1 In the Consultation Document, entitled "Quality Housing — Partnering for Changes", issued by the Housing Authority in January 2000, it was mentioned that "**Departmental reform**" was necessary to improve quality progressively in the long run. We have carried out a survey amongst engineers in the Housing Department to solicit their views. We have received a **consensus** that a major structural change in the organization of the Housing Authority/Housing Department is needed to ensure better policy making and implementation of the quality objectives.

1.2 The proposal for organizational reform has not been debated to quite the same extent as other measures proposed by the Housing Authority. We engineers and practitioners consider that there is a strong case for **major organizational change** to the Housing Authority/Housing Department to **improve** quality standard, efficiency and cost-effectiveness in the production process of public housing as a whole.

1.3 Having regard to the engineers' views collected during our consultation, we have the following **key proposals**:-

- Reorganization of Housing Authority; and
- Reorganization of Housing Department.

1.4 The above have already been **reflected** in the views proposed by the Hong Kong Institution of Engineers (HKIE) to the LegCo Housing Panel, viz.

"Finally Housing Department should seriously consider making good reference to the procedures in the Works Bureau used for the management of construction projects, and for the management of consultants and contractors. Indeed Chief Secretary should seriously consider **putting the Housing Department under the administration of** Works Bureau leaving the housing policy to be handled by the Housing Bureau only". (paragraph 3.7 of HKIE Submission)

1.5 The above proposals will enable the Government to provide improved **quality housing construction** to the Community and **meet new challenges** relating to sustainable development, safety, environmental protection, cost-saving and quality standards in the 21st century. The new organizational structure will provide **strong and clear leadership** in housing construction matters. The reorganized Works Bureau will facilitate overall co-ordination over construction standards and other environmental issues. **The whole construction community will benefit as a result.**

## 2. Existing Organization Problems

### 2.1 Problems Faced by Professionals

2.1.1 In the last few years, there were **too many policy changes** such as the ISO9000 Quality System, Re-engineering, EPP etc. taken place within the Housing Department. These changes were happening **too fast and too frequent**. Due to heavy workload, the staff always do not find enough time to get themselves acquainted with the new changes, not to mention their implementation.

2.1.2 On top of these policy changes, Housing Department was also undergoing many **organizational changes** in the last few years. These changes did not really improve the overall efficiency of the staff but made them more **confused** in certain aspects.

2.1.3 **Too many committees** are involved during the implementation of a project. Workload of staff are **undoubtedly increased** with no actual benefits to the overall program and quality of the production.

2.1.4 The implementation of the **"Private Sectors Involvement"** by the Housing Authority has caused **severe impact** to the morale of the staff which has already affected their efficiency and output. One has to bear in mind that many of these staff join the Government service

for its **much better job security** in return for a less **prosperous career.**

2.2 Problems of Open Directorate

2.2.1 The Department is **too big** and **too complicated** to run. Some of the D2/D3 senior directorates are **generalists** with **little** knowledge or background experience of the professional issues. We believe they have **encountered difficulties** in providing sound technical advice to the senior management. They **are not competent enough to lead or direct** a large team of professional and technical staff. Please refer to **Annex A** for the comparison of the "Annual Capital Expenditure" and "Directorate Structure" between Housing Department and the Works Group of Departments.

2.2.2 **Professional standards** have not been sufficiently emphasized as in works departments. The senior directorate did not have the necessary professional knowledge which cannot be acquired through short period of training or attachment.

2.2.3 Due to the lack of experience and/or exposure of the senior directorates, **inappropriate decisions** such as the shortening of construction time, the 50/50 weighting of technical and fee score adopted in the two-envelope system for consultant appointment etc. were made.

2.2.4 **Tedious and cumbersome procedures** and the need to digest non-construction related documents (and attend unrelated committees/meetings) dilute and diffuse the valuable working time of the senior directorates which can be more usefully spent on construction matters.

## 3. Proposals for Improvement

3.1 It is proposed to **create a new department** to be responsible only for the housing construction. The new department should be

headed by a Director of D6 level who would be supported by two Deputy Directors of D3 level. The new department could be put under the administration of the Secretary for Works.

3.2 Professionals in a works department would naturally wish to ensure **proper accountability** of their acts and would seek to ensure that decisions made on their behalf are made by someone who is **professionally qualified.** As such, **significant weight** must be given to the professional background of the candidates for filling all the directorate posts of the proposed new department.

3.3 For your easy reference, our proposal is summarized in **Annex B**. A **functional** structure is proposed to enhance the **quality** standards.

## 4. Benefits

Our "Proposal for Improvement" above will create a situation whereby the Government can **re-build its reputation** in the public housing issue in the long run. Some of the benefits which can be derived from our proposal are listed below :-

(a) Decisions will be made by a directorate structure comprising construction professionals who have **built up their experience over years.** They can put across their professional judgment and present technical issues to the public **convincingly** which are difficult for a non-professional to handle simply because these are **outside** the realm of his profession.

(b) Staff of the new department will be very **well motivated** because they will have a **clearer and better defined career ladder.** Professional staff usually prefer to pursue their career in their own construction-related field.

(c) Professional qualified directorate staff will **command better respect** of the professional and technical staff.

(d) Streamlined framework in the new department will facilitate **better co-ordination and efficiency** which will eventually make **delivery of housing construction** more cost-effective.

(e) There will be **better co-ordination with and support** from other works departments (such as Building Department, Civil Engineering Department, Drainage Services Department, Highways Department, Territory Development, Transport Department and Water Supply Department) conducive to the housing development works. It is because all these departments serve the same policy bureau.

5. <u>**Conclusion**</u>

5.1 Housing Department engineers have undertaken extensive works for the Housing Authority in the past 25 years. They have **witnessed** various changes and reforms, and faced numerous **challenges in housing construction.** Our proposals in this Paper **stemmed** from their close involvement with public housing development and the rich experience gained from both practical and administrative angles.

5.2 Public confidence in the Housing Authority and the performance of the Housing Department has been **over-shadowed** by the numerous events of the last 12 months. Both the Housing Authority and Housing Department have been **bombarded** by the newspapers in the last few months, **virtually with no compliments.**

5.3 Based on our SAR Chief Executive's policy speech and Housing Authority's pledges, the Government must both meet the expectations for a **higher standard of provision and supervision of housing construction**, and be aware of the political and environmental requirements. The department responsible for public housing construction must be led by a directorate structure comprising construction professionals, and related construction policies may be made by either the Works or Housing Bureau in order to meet the new challenges with respect to setting new goals, standards and priorities.

5.4 We believe that the proposed new structure and reorganization in the area of housing construction will **meet** our basic objective of better delivery of quality housing. It will also be more efficient and cost-effective. It will provide **better co-ordination and liaison** with contractors and consultants, and amongst works group of departments and will **streamline** the whole construction operation. Our proposals will improve overall quality service of public housing, eliminate duplication of effort for construction standards and administration.

## 6. Way Forward

In view of the above, we conclude that a **separate** Housing Construction Department must be set up under the administration of a policy bureau (preferably under Works Bureau).

****** END ******

## 1. Comparison of Annual Capital Expenditure for 1999/2000

| Housing Department | Works Group of Departments |
|---|---|
| HK$28,410M | HK$21,833M |

HD spends 30% more than the Works Group of Departments.

## 2. Comparison of Works-related Directorate Structure

### 2.1 D3 and Above Level

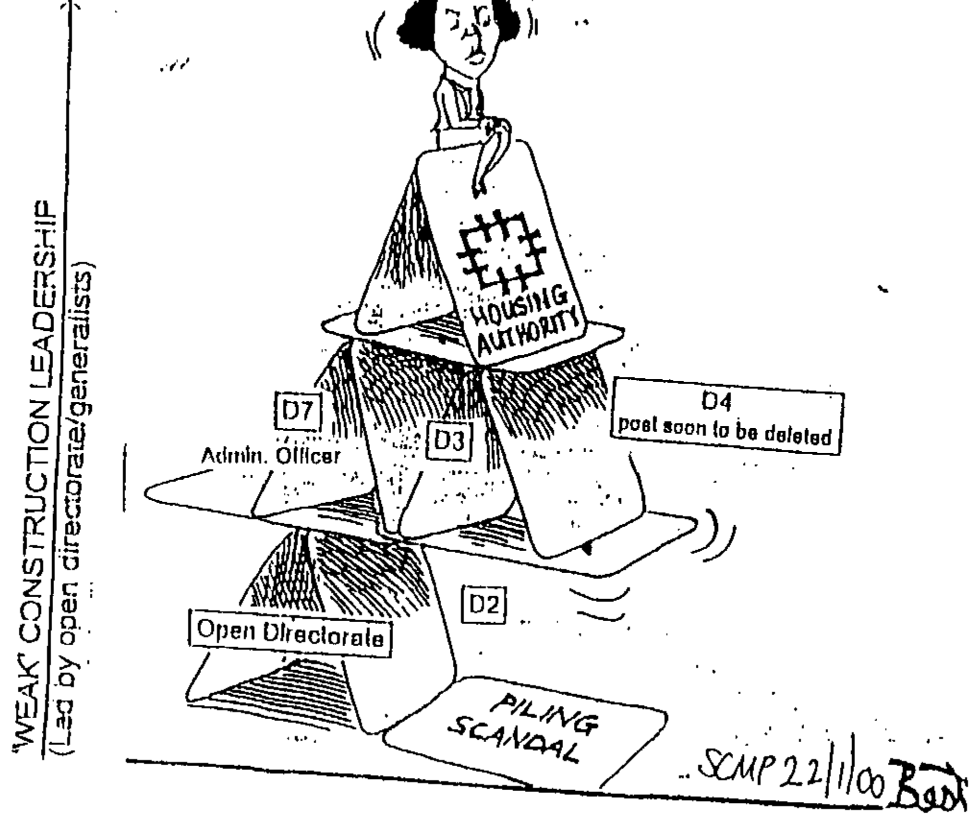
| Housing Department | Works Group of Departments |
|---|---|
| **Open Directorate**<br>• Deputy Director/Works : a D4 post currently occupied by Mr. [redacted] who is a Maintenance Surveyor by profession. This post however will be deleted when Mr. [redacted] retires.<br>• Business Director/Development : a D3 post currently occupied by Mr, [redacted] who is a town planner by profession. | • Directors : all D5 or D6 posts.<br>• Deputy Directors : all D3 or D4 posts.<br>• The above posts are all occupied by construction professionals. |

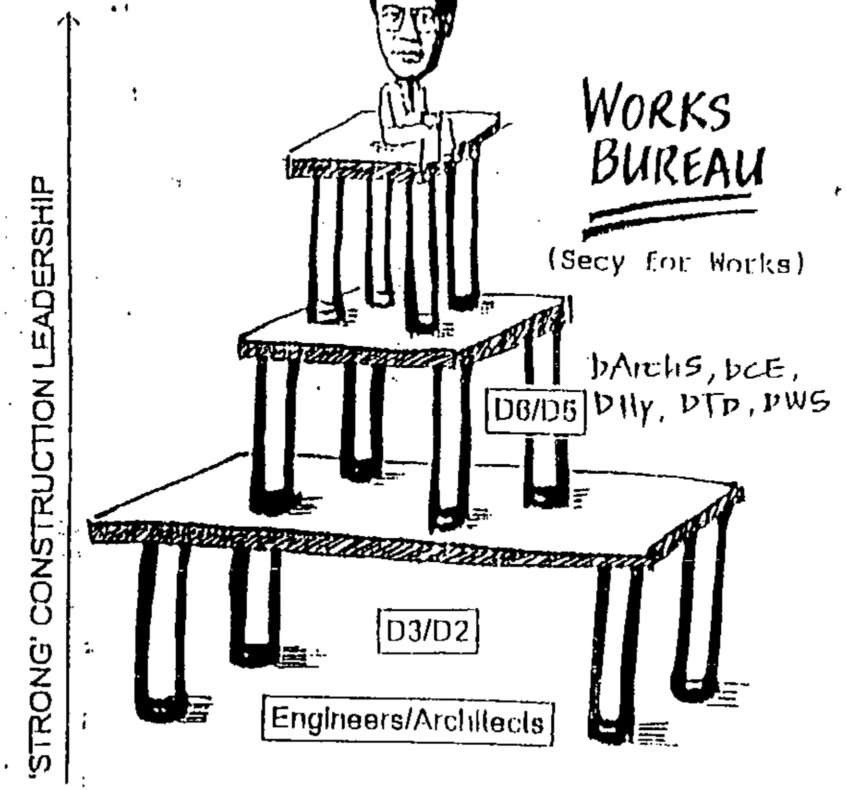
### 2.2 At D2 Level

| Housing Department | Works Group of Departments |
|---|---|
| • Open Directorate. | • All occupied by construction professional. |

* The Works Group of Departments comprise of the Civil Engineering Department, Drainage Services Department, Highways Department, NAPCO, Territory Development Department and Water Supplies Department.

Sheet 2 of 2




## Construction Expenditure in 1999/2000

| | HA Construction Budget |
|---|---|
| Construction Expenditure | $28.4 *billion* |

Sources : BC Paper 170/99
Information & Salaries Sub-section, Finance and Accounting Branch, HD

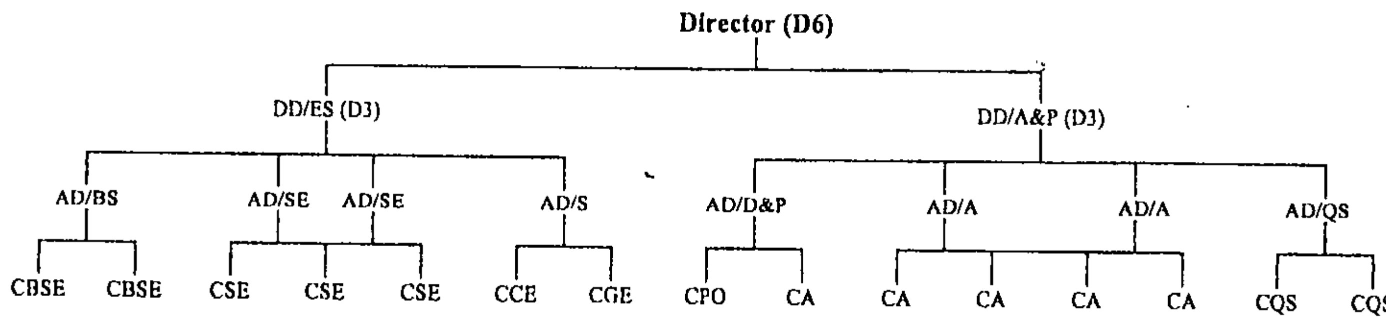
## Estimated Expenditure for Works Department ($M)

for 1999/2000 : total $21.8 billion

| Head (PWP) | CED | WSD | TDD | HyD | NAPCO | Arch SD | HAD | EPD | DSD |
|---|---|---|---|---|---|---|---|---|---|
| 702 | | 9.3 | 127 | 210.8 | 0.5 | 187.8 | | | |
| | 80 | | 665 | | | 220.4 | | | |
| 703 | | | | | | 7521.1 | | | |
| 704 | | | | | | | | | 2475 |
| 705 | 1111 | | | | | | | 366.1 | |
| 706 | | | | 2567.8 | | | | | |
| 707 | | | 2221 | | | | | | |
| 709 | | 948.5 | | | | | | | |
| 711 | 10 | 1630 | 779 | 73.7 | | 213.9 | | | |
| | 10 | 10 | 10 | 10 | | | | | |
| *Total* | *1211* | *2597.8* | *3801* | *2862.3* | *0.5* | *8143.2* | *376* | *366.1* | *2475* |

Annex B

## 1. Proposed Organization of the New Department

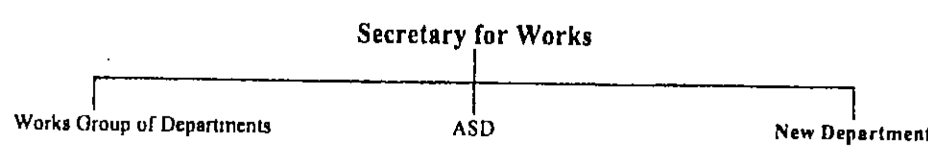



**Legends**

DD/A&P : Deputy Director/Architect & Planning
DD/ES : Deputy Director/Engineering Services
AD/A : Assistant Director/Architect
AD/BS : Assistant Director/Building Services
AD/D&P : Assistant Director/Development & Planning
AD/QS : Assistant Director/Quantity Surveying
AD/S : Assistant Director/Services
AD/SE : Assistant Director/Structural Engineering

CA : Chief Architect
CBSE : Chief Building Services Engineer
CCE : Chief Civil Engineer
CGE : Chief Geotechnical Engineer
CPO : Chief Planning Officer
CQS : Chief Quantity Surveyor
CSE : Chief Structural Engineer

## 2. Proposed Organization of Policy Bureau




Remarks : A functional organization is proposed to ensure enhanced quality standard.

# PROPOSED RE-ORGANIZATION CHART

HONG KONG HOUSING DEPARTMENT ARCHITECTS ASSOCIATION
Housing Authority Headquarters, 33 Fat Kwong Street, Kowloon, Hong Kong
香港房屋署建築師協會 九龍佛光街33號房屋委員會總辦事處

19 October, 2000

**Direct Investigation into the Management of Construction Projects by the Housing Authority and the Housing Department**

Thank you very much for your letter dated 28 June 1999 addressed to [redacted], who has passed the letter to me for a reply.

First, I would like to express our appreciation of your proactive action as to embark on this direct investigation. In fact, this Association has long been concerned with the various aspects of the management of the public housing development programme, in which members of this Association have a strong commitment.

Enclosed is a summary of our comments on our concerned issues, which you may find useful. Please accept my apologies for this belated reply.

**Ombudsman's Direct Investigation into Management of Construction Projects by Housing Authority and Housing Department**

**Comments by Hong Kong Housing Department Architects Association**

## 1 Introduction

1.1 In the press release of the Ombudsman concerning his direct investigation into the management of construction projects by the Housing Authority and the Housing Department, it was stated that issues have been raised as concerned by the public over the short-pile incident of Yuen Chau Kok. The Housing Authority published a report, viz., the "Report on the Investigation Panel on Accountability (Piling Contract 166/1997 - Shatin 14B Hoase 2)".

1.2 Shortly after the report was published, this Association has, together with eight staff associations of the Housing Department, expressed dissatisfaction with the way in which the Housing Authority and the Housing Department handled the report. Also see a copy of the press releases, Appendices A & B attached.

## 2 The Crux of the Problems

2.1 On the management of construction projects, this association has throughout the years given various comments to the management on the improvement of the systems and practices. It is definitely unfair to the staff when the management disregarded the suggestions of the staff associations on the one hand but laid the blame on the staff in the event of the incidents on the other.

2.2 In time of acute shortage of resources and under the prevalent unreasonable systems, the staff have worked and will continue to work industriously to serve the public.

2.3 In response to the quest for improvement of housing quality, this Association has made submissions to the management, urging for effective communication between the management and the staff. Various major concerns have been raised for the consideration of the Department and as follows-

2.3.1 The need to strengthen functional control and management support

2.3.2 The need to review architect-led consultancies

2.3.3 The need to avoid compartmentation of design and contract management activities

2.3.4 The need to streamline office practices and remove over-monitoring

2.3.5 The need to restore professionalism at various levels of management

2.3.6 The need to adopt diversified design approaches

2.3.7 The need to review resouces support

2.3.8 The need to consult staff in making new policyies

2.3.9 The need to regulate the scope and speed of outsourcing

2.4 Please refer to a series of letters from the staff to the management at various levels at Appendices C, D & E for further details.

3 **Epilogue**

3.1 It is hoped that the Ombudsman will, this time, listen to the voice of the staff, reveal to the public the unfair treatment of the management to the staff in the incident and speak fairly for the staff.

# 房屋署工務專業協會聯合聲明

我們對於房委會及房署處理圓洲角愉翠苑地基問題調查小組報告之手法極表不滿，特此作出以下聲明:

（一） 公佈手法不當 — 房委會及房署一方面聲稱祗是剛收到報告，需要研究和考慮，兩星期後再決定是否接納，但在另一方面卻於當事人對報告內容沒有機會回應的情況下向外公開。這做法足以造成公眾審判，對當事人的聲譽及其家人造成困擾而引致無可挽回的傷害。

（二） 報告不全面 — 房委會爲調查小組訂下的局限性工作範圍，使報告未能指出政策、制度及部門運作上的錯誤和掣肘。同時，該報告顯示調查小組對房署的運作未有充份和正確的理解。

（三） 調查欠公允 — 報告祗記錄事情發生的經過而未有對背後原因作出深入的探討，以至忽略與事件有關的重要環境因素。近年我們面對龐大的建屋量，例如本年度落成單位預計爲九萬多，致使各職系的工作量大增。在工程監管上，署方未能以足夠資源及專才，例如增設駐地盤工程師，來配合龐大的增產量。報告未能指出問題所在及考慮其對當事人工作的影響，實屬不公。

（四） 漠視問題癥結 — 報告提出的一些改善建議，其實有關工會早於多年前已向署方提出。可惜署方一直充耳不聞，到現在各宗事故發生後才倉卒作出應變措施。署方過往漠視我們專業工會的意見，現在卻草率地將責任全推在個別員工身上，實對當事人極不公平。

我們在資源極度短缺的情況下，於各種不合理制度的規範下，仍努力不懈地工作，爲市民服務。現卻面對房委會及房署不公平的對待，士氣被嚴重打擊，我們深表不滿和遺憾。

| | | |
|---|---|---|
| 房屋署建築師協會 | 房屋署屋宇裝備工程師協會 | 房屋署土木工程師協會 |
| 房屋署土力工程師協會 | 房屋署園林建築師協會 | 房屋署保養測量師協會 |
| 房屋署規劃師協會 | 房屋署工料測量師協會 | 香港房屋署結構工程師協會 |

二零零零年五月三十一日

# 就圓洲角地基問題調查小組報告

## 致全港市民公開信

我們，包括房署九個工務專業協會、本地高級公務員協會、政府非海外土木工程師協會和其它五個政府部門的專業協會，對沙田圓州角調查小組報告書，調查不全面、內容不客觀及漠視問題癥結，感到非常失望。報告書祇描述事件發生經過而不提當時工程師身處的客觀環境，對於房署不合理的工程監督制度和根本沒有足夠人手應付三倍於平常建屋量這兩個關鍵問題完全忽略，給公眾一個錯覺，以爲責任全在員工身上。

房屋委員會在有關人士未有機會回應前，全面公佈報告書內容，對四名房署工程師點名批評，此舉把公眾的焦點，引導到他們的身上，對他們本人、家人及整個房署的工務專業人員帶來嚴重的傷害。在政府任職的專業人士對此均極表關注。報告書的內容和房屋委員會的處理手法，令大部分政府專業協會對事件是否會得到公平處理完全失卻信心。

因此，我們強烈要求，將事件交由立法會所成立的專責委員會作公平、公正及全面的調查。把整個事故的基本原因向全港市民作出交代。在事件真相未弄清楚前，政府不應草率進行紀律程序。

我們同時要求房屋委員會和房屋署，馬上檢討和改善工程監督制度和增加人手，以確保公屋的質素。

香港房屋署結構工程師協會
房屋署土力工程師協會
房屋署建築師協會
房屋署屋宇裝備工程師協會
房屋署土木工程師協會
房屋署園林建築師協會
房屋署保養測量師協會
房屋署規劃師協會
房屋署工料測量師協會

本地高級公務員協會
政府非海外土木工程師協會
政府水務專業人員協會
土木工程署本地土力工程師協會
屋宇署結構工程師協會
建築署結構工程師協會
機電工程署本地工程師協會

二零零零年六月十五日

HONG KONG HOUSING DEPARTMENT ARCHITECTS ASSOCIATION
Housing Authority Headquarters, 33 Fat Kwong Street, Kowloon, Hong Kong
香港房屋署建築師協會 九龍佛光街33號房屋委員會總辦事處

10 January 2000

Concerted Efforts to Promote Quality of Public Housing

The Architects Association welcomes your determination and deliberations in the pursuit of quality in public housing, as seen in your speech delivered to the LegCo Panel on 9 December 1999. Indeed concerted efforts from all concerned parties are critical to drive our way forward.

Since 1997, the Department has gone through several major office system changes to cope with the high production demand. The staff are stressed to adapt to the new system that each change has brought forth. By now, we come to a situation that the current working system only requires fine-tuning to rectify anomalies that still prevail. Hence any radical change is not desirable.

The Association shares the Department's value to produce quality housing and we are committed to work towards this goal. Yet we are faced with the problem of managing large production size by very tight resources at different levels, including professional, technical and site supervisory grade, resulting in minimal efforts spent to individual tasks. Cumbersome and confusing works procedures are creating hurdles that have become bottleneck for efficient works processes. The Association considers the need to raise the concern to you and to the Management for consideration within the new office framework –

**(a) Strengthen functional control and management support**

(i) The set up of dedicated project management teams in 1997 strengthened the production control. However that did not relieve the duties of the Chief Architects, who are faced with the quest of the client for continuous improvement and quality initiatives. The Association considered reducing the Chief Architects to three in late 1997 weakened the supervisory control in design and contract management. Such reduction led to overspan of control within each Section and diminished the management support.

/(a) (ii) Architects have .....

(ii) Architects have continued to lead project teams taking up the coordination role. Its efficiency depends on the collaborated efforts and the contribution of expertise from the team members. The coordination activities are complex and time demanding and Architects continue to be faced with the associated heavier workload that is increasingly jeopardising the quality of their service.

(iii) The Association maintains the view that any organisation should maintain a fair span of control and the Chief Architect post should be reinstated to at least four. Role of the Architects as leader of the design and building contract teams should be recognised and the manning scale should maintain at no more than 2 projects per Architect. To reinforce quality of works, resident architects should be appointed to give direct site supervision on specialised, non-standard design and problematic projects to ensure prompt directions given at construction stage.

(iv) The Association heard that there was a proposal being developed to create more Project Directors (PD) post to impróve the management system while the senior professionals were empowered to take up duties as that of the Chiefs and reported direct to the PD. This scenario will be far worse than of the past without benefits to the quality objectives. The Association strongly objects to this proposal because the span of control of the PD is too wide to allow the PD to apprehend all critical project activities. The total management responsibility will inevitably be downloaded to the Seniors.

The Association opines that the experience of the Chief should not be undermined. The technical and managerial skills of a Chief cannot be easily taken over by a Senior, lest to say the less experienced ones. As the PD's are open disciplinary grade with the possibility of cross posting from other Branches, project support given to the Seniors will be minimum. This leaves the Seniors to resolve contract and technical issues by their own. The consistency of product's quality is at greater risk which defeats the objectives.

The Association shares the view that creation of more PD posts brings better control to works quality but objects strongly if their creation is at the expense of the Chief Architect post and to the devolution of responsibility to the Senior level. The above proposal also suffocates career path to staff and detrimental to the morale, which is significant at this time when all levels of staff should work together as a cohesive force.

/(b) Review ......

(b) Review Architect-led Consultancy

The Architect-led consultancies have constituted input on a proportionate amount of housing production. The Association holds the view that selection of consultancy should not be biased towards low fee, because it has a direct bearing on the resources that the consultant assigns on the project. To produce a win-win-win situation for the consultant, our PM team and HA, the selection system needs reviewing to ensure meeting the quality objectives.

**(c) Avoid compartmentalization of design and contract management activities**

(i) Design and contract management should not be split apart as an activity managed separately by different teams. To any serving Architect, this will stifle creativity, with no job continuity, nor satisfaction from work. In the end, morale will be affected.

(ii) The negative impacts are adversarial to quality and to staff relationship because it is unlikely that there will be ownership by individual on the projects.

(iii) The Association maintains the view that building design and contract management should not be treated as separate parts in the continuum. The continuity of the two processes should complement the ultimate quality of the product. Indeed the concept, design, detail and execution are instrumental to the success of a project.

**(d) Streamline office practices and remove over-monitoring**

(i) The current uncoordinated and compounded system control in the development process have severely hampered the professionalism of individuals. Staff are spending disproportionate amount of time to follow cumbersome procedures which bring no direct benefits to the quality of works.

(ii) Streamlining office practices is crucial to enhance office efficiency. Appropriate level of authority and decision making should be given to staff bearing the responsibility. The Association is willing to propose to the Management on process that can be streamlined to enhance the service productivity.

/The Association .......

The Association welcomes the opportunity for consultation on ar system change in the office. Unfortunately, the communication betwee Management and Staff is never very effective and often views expressed by th Association are not seriously considered. Often hasty reactions to perceive problems have possibly led to ill-conceived solutions and disruption rather tha solving the problem. The Authority emphasizes reinforcing partnership with th building industry, professional institutes, contractors, consultants etc. Y partnership with the staff is equally necessary because their support an contribution are important attributes for the success of a system reform. Let m quote a saying that "the success or failure of the organization rests with the attitud and morale of the staff" and the Association sincerely hopes that we will b consulted before the proposal is consolidated. Our views were also expressed t Mr. [redacted] at our meeting with him on 24 December 1999.

The Association wishes you every success in the Millennium. W welcome exchange of views at any time convenient to you. Thank you!

c.c.

RH/lm

HONG KONG HOUSING DEPARTMENT ARCHITECTS ASSOCIATION
Housing Authority Headquarters, 33 Fat Kwong Street, Kowloon, Hong Kong
香港房屋署建築師協會 九龍佛光街33號房屋委員會總辦事處

To :

:e : 28 April 2000

**Quality Housing – Partnering for Change**
**Feedback to Consultation**

The Quality Housing Consultative Document brings out the right ingredients to improve the construction quality and industry culture, of which we fully share and support. To put the various proposals contained in the document into implementation, we need strong commitment and leadership from the various stakeholders and our Association is ready to shoulder these challenges.

Other than to express our views toward the various proposals in the attached Appendix, we would like to highlight the following fundamental areas which we consider are cornerstone to accomplish success in the reforms for your consideration :-

(a) Partnership

Partnership is meaningless if there is no mutual trust and respect within the working relationship, nor without sharing common objectives. There are diversified interest among different stakeholders and arriving at common goals without suffocating self-interest is essential. Other than partnering with other stakeholders, we believe that partnership between the Management and Staff is the most effective and reliant means to establish mutual trust and commitment. In the consultative document, there is not much suggestion on this respect but there contains pronounced strengthening of audit which is yet another check in different aspect of works. This will jeopardize the spirit of partnership. Resources should be more meaningfully expended on the actual works input for quality results.

/.....

(b) Leadership and Professionalism

We fully support that professionalism of different stakeholders should be recognized and upheld, but would like to emphasis that there is a strong need to allocate 'the right people to perform the right job'. Define clearly the roles and responsibilities is not adequate. To enable an officer to function and to maximize his contribution, it is essential to peg the right qualified professional with the right duty.

Building construction is a highly technical and specialized industry. It requires the input of different professionals who have been properly trained in their own special fields. Many decisions require strong technical input and past experience in the field and not simply general administrative decision. The current mismatch of staff to the post, especially in the PM teams, leads to duplication of resources and conflict between PM, CM and Development teams. The current administrative system for open-posting focusing on management ability weakens the decision making process and the leadership to manage the office.

There is an imminent need to review the competency requirement of each functional post and strengthen the professional structure in the organization, including the senior management level, followed by deploying the right staff to suit the post. This is a far more effective and direct human resources management means rather than any worded strategy.

(c) Quality of Housing – Various Design Approaches

The document contains various design approaches to create quality housing. These include wider use of non-standard design, mixed development and adopting design and build project. We support diversified building design approaches to meet client's different requirements, site situation needs and the varied interest of the customers. We believe that our Architects are fully capable to perform the task and welcome the challenge.

/.....

(c) (Cont'd)

However, to prepare for this change in design approach, we need to develop a mature infrastructure. These include clear detailed design and technical requirements, construction quality, cost control etc. and the office set up (i.e. staff deployment, resource support etc.) to enable the process. Adequate time should be allowed for the Architect and project team members to manage the design and construction process to achieve quality product. The current standard design lead time is already tight especially in meeting layers of submission. Besides production time for non-standard design need to be longer to cope with the non-standard design and project specific needs.

Currently Project Teams are faced with a lot of changes during the design and construction process e.g. uncertain project status for rental/sales, changing housing policy etc. This inevitably leads to abortive work and lower works quality. We request that senior management should firm up these requirement at the outset of the project.

(d) <u>Strong Resources Support</u>

The initiatives proposed in the document are constructive in improving the housing product. However, to fully implement the system, it will bound to bring in resources implication. We should not ignore that part of the constraints we face in the organization leading to the current quality problem is attributed by the inadequate resources. No matter how staff self-enhance their efficiency and streamline the process, we would like to draw the Management's attention that it still require optimum amount of staff deployment and time resources. The Authority should be prepared to pay in exchange for quality outputs.

(d) (Cont'd)

Under the current stretch in resources, prioritizes the implementation, forward planning and making due preparation in the office structure are ways to release the bunch activities.

We fully support with the proposed investment in the research and development, for advancement of building technology and professional development and gain new insights for the vision we would like to create in the housing products. The quality of our housing product cannot leap forward if there is little impetus from the Authority.

I apologize for the belated reply and wish you every success in formulating the quality strategy. Should you wish to speak on any of the points raised in the letter, we are pleased to meet at time convenient to you. Thank you.

# Feedback on the various proposals put up under the Quality Housing Consultative Document

## Chapter 4 : Building up a Partnering Framework

### Commitment

4.4 (b) Support registering the names of different players in the foundation stones, sales brochures and publications. The Architectural Sections' names who have taken part in the project will suffice for the purpose (i.e. Chief Architect/2 of the Development and Construction Branch, Housing Department).

To maintain project continuity and commitment by the individual project team member, it is necessary to minimize changes in staff deployment.

### Feedback and Communication

4.9 and 4.12 Support setting up a dedicated team to study market trends and customer needs to make improvements and to handle feedback from tenant/owners or process owners in a efficient and timely manner. This should include our Branch's representation to tap the customers' views to improve our housing products.

### Balanced Reward and Punishment

4.16 and 4.20 Support awarding better tendering opportunity to consistently top performing contractors and consultants and take prompt and severe penalties to mal-performing ones. This is especially important to secure the right value in the industry. The message for direct and severe penalty should also apply to mal-practicing suppliers who are within the HD's control list to ensure products delivered are in-line with the Approved products.

4.20 and 4.21 Support exclusion of exceptional low bids from tender assessment and establishing premium league in the tendering opportunities. For selection of consultants, we urge for putting emphasis on quality of service and technical competency rather than on fee. To meet this objective, a transparent and objective assessment system should be in place instead of relying on simple score formula. As every consultant selection/appointment exercise attracts fair a large amount of in-house staff resources, we suggest the system be used under a suitable project size. For relatively simple project, serial project may be a better option to save resources input.

## Chapter 5 : Assuring Product Quality

### Site Supervision

5.6 (a) Support deploying resident architects (RA) on large-scale or complex building projects. This is especially essential when non-standard design calling for close site supervision to coordinate design and construction details. The RA should have sufficient experience to exercise certain degree of dependency and professional judgement and be accountable to the responsible Contract Manager.

### Third-party Audit

5.9 Putting HA's buildings under the control of the Building Ordinance (BO) in the long run can eradicate any anomaly found in statute compliance in the current self-regulatory control system. However the office set-up, production process and resources support should be carefully planned to make way for the system change. Somehow, the control under BO is a means to ensure statue compliance and fulfils the minimum standards of safety and health requirements but does not lend itself to accomplishing 'quality' products in the end. Hence input on quality management and control should not be overridden.

### Dealing with Defects

5.15 Dubious over the value of contractor's warranty in securing quality product, because the risk is transferred to the buyers to indemnify themselves from any likely defective works of the contractors. The process of administering the system and verification of defects is complicated and resource draining. The concept should be well-tested to suit the local context, complete with a full backbone support in the market, before the system is in place. It is advisable to put the resources in tightening up the quality control instead of reverting to this proposal.

## Chapter 6 : Investing in a Professional Workforce

In general, support investment be put to both the workers and stakeholders in the industry and the staff of the Department to enhance professional knowledge. Training courses with a well balance to polish management and technical skills for staff are essential to create a learning organization. Research and development in building design, material and technology are essential parts to identify what we want of the future housing product design. Housing Authority should run parallel hands with the construction industry and with the Central Government for advancement in this subject. This is in line with the proposal at paragraph 7.3 (c) of the Consultative Document.

## Chapter 7 : Striving for Productivity and Efficiency

Integrated Production Process

7.5 (a), (b) Agree that diversified building design approaches can be used to meet Client's different requirements, site situation needs and the varied interest of the customers. However, it is necessary to develop the basic infrastructure, which includes technical considerations and the office set up. To ensure that the gains benefitted in standard design, especially in quality control in construction, can be adapted in non-standard design construction, contractor's experience can be brought into the development process. This minimizes the risk and quality problems we faced in the past.

7.5 (g) Having considered that the Consultant Architect should maintain the role of a Team Leader for the effective management of a project, direct appointment of individual consultants under separate management by HD's staff induce loose team control and dampen the cohesiveness of the team. One possible option is to introduce 'nominated' sub-consultants to enter agreement with the lead consultant, who will then be charged with managing the full Project Team.

Departmental Reform

7.13 In the proposed regulatory control function, emphases should be put on system improvement instead of being a tool for fault-finding. The spirit of partnership should be practised throughout the regulatory process (i.e. both the regulator and the regulatee) and instigate immediate improvements to the system. The staff deployed in the regulatory control team should be carefully controlled to maintain sufficient front-line staff to take up the daily monitoring duties.

## Chapter 8 : Addressing Existing Public Concerns

Production Peak

8.8 (b) Agree that contracting out part of the final inspection work is only a stop-gap measure to address resources problem arising from the building production. The appointed team should still be under the supervision of the Contract Manager. We do not support that the monitoring team be conceived as an independent party to take over the role of the Project Team.

**Remarks on HA's input to PSPS as a whole and Paving the way to Non-standard Design**

The PSPS is one form of housing product falling under the PHDP. The role of HD and HA is very ambiguous, denying of responsibility at times of owners' complaints while its revenue generation constitutes a major source of income in HA's accounts. If HA is determined to improve the quality of housing products as a whole, it is time to truly review the input from every involved stakeholder and the resources of HD who take part in managing PSPS. This is essential when lessons from PSPS can serve as a good reference to developing non-standard design, mixed development or design-and-build projects of the future.

[redacted]

# 房屋署工會大聯盟召集人[redacted]向新任房委會主席[redacted]遞建議書

[redacted]：

您好，我是房屋署工會大聯盟召集人[redacted]，是房署27個工會聯盟的主席，今天很高興能與[redacted]主席會面。

## 加強與工會溝通 改善員工關係

九月廿九日那天，當局宣佈了您接任房委會主席，傳媒都追問我有關工會的看法，當然，我們對您是有一定的期望的，尤其是希望您加強對工會的溝通，並且竭力改善與員工的關係。

## 部門單方面泡製改革建議 沒有全面諮詢工會

首先，我向您坦言員工關係惡劣的原因，這幾年來，部門變化很大，推行了許多新措施，例如提高管理質素、管理及維修合併、人力資源計劃、新管理模式等等，都是在很短促的時間內通知工會去聽簡介，不久便付諸實行，且宣佈已諮詢了工會，這令工會十分反感。所有新措施的制定，完全沒有讓工會參與，以往的所謂部門諮詢會議，每3個月才開一次，也是硬銷政策之地方，所以工會一年多以來不參與那些諮詢會議，是一種抗議。況且署方安排非職工會代表列席於諮詢會議，與職工會代表平起平坐，令工會十分不滿。所以部門的新政策都引起員工的抗拒，工會也別無他法，唯有組織起他們，上街集會。

## 要成立工作小組製定新措施 讓工會參與討論

所以，[redacted]主席，我們期望您能扭轉這個局面，定下新制度，即凡是要推行新措施、新政策、新計劃之前，房署要成立工作小組，讓工會參與，管員雙方在有商有量的情況下，慕求達到共識，才交房委會審議批准，然後付諸實行。

## 工作量不斷增加 人手卻不斷緊縮

另外，部門基於逐步移交政策，便完全漠視目前員方的人力分配，短期內部分中基層員工的工作量大增，有某些職級已喘不過氣，但部門對這些職級漠不關心，仍然凍結人手，使他們承受不斷增加的工作量，又在出現問題時，將責任推卸落員工身上。現時絕大部分員工都怨憤衝天，工會十分擔心事情如此發展下去，會出現類似70年代警廉衝突及目前爭取居權者的蠻行，工會當然盡量疏導，但部門呢?

## 要調節外判的範圍及速度

房署員工承受著另一種較長遠的憂心，在逐步移交計劃下，部門將大量的公屋管理及維修交給私人物業管理公司及業主立案法團處理，該視廉署數字顯示這方面的貪污舞弊個案，是私人貪污行爲之冠。另外，新地盤大部分近六十份合約已交顧問工程公司；房署常項目經理，使署內的建築師十分擔心。如此不斷和大量的外判，會令員工擔心自己的職業前途，雖然當局暫時保證不會裁員，但外判的範圍和步伐確令員工擔心有朝一日，他們會不夠工作做，終於難以向公眾交待，他們亦察覺絕對沒有升級機會，所以員工士氣十分低落，也充滿憂慮，在有冤無路訴的情況下，被迫上街。房署確實要調節外判的範圍及速度，例如建築監督和公屋的管理權決不應該外判，速度要放緩，令房署員工留得安心。

請[redacted]先生恕我直言，工會人有個通病，就是知無不言，言無不實，失敬，失敬。

機電工程署本地工程師協會

Association of Local Engineers of Electrical
& Mechanical Services Department

98, Caroline Hill Road, Causeway Bay, Hong Kong.

Our Ref.: ALEEMSD2000-18-OMBUDSMAN

14 July 2000

The ombudsman
31/F Gateway, Tower 1
25 Canton Road
Tsim Sha Tsui
Hong Kong

[redacted]

Dear Sir,

Thank you for your letter ref (16) in OMB/WP/14/1 S.F. 86 dated 28 June 2000.

Our Association is pleased to learn that the Office of the Ombudsman has initiated a direct investigation into the subject matter. In fact, in view of the scale and the seriousness of the matter, we are not convinced that the investigation being conducted by the Investigation Panel of the Housing Department, confining only to the faulty piling at the Home Ownership Scheme project in Yuen Chau Kok will surface the core of the problem.

Our Association is of the opinion that the grave concern of the public that has been aroused towards the subject matter has demanded a more comprehensive investigation to be carried out by an independent third party, such as the Office of the Ombudsman.

Regarding the 2nd paragraph of your letter, as our members are not directly involved in the project management in HA/HD construction site, I am afraid that we are not in the appropriate position to offer any comment on the supervisory system or the associated manpower issue.

Thank you for your kindly attention.

Yours sincerely

Chairman
Association of Local Engineers of
Electrical and Mechanical Services Department

c.c. S

filecode: ALEEMSD2000-18-OMBUDSMAN

**HONG KONG HOUSIN  - EPARTMENT**
**GEOTECHNICAL ENGI  IS ASSOC'ATION**
Housing Authority Headquarters, 33, Fat Kwong Street, K  ig Kong.

Compendium 6-4-9

Your Ref : (16) in OMB/WP/14/1 S.F. 86

ıg Department
Geotechnical Engineers Association
17/F Tower 1, Grand Century Place
No. 193 Prince Edward Road West,
Mongkok, Kowloon
1 August 2000

The Ombudsman
Office of The Ombudsman Hong Kong
31/F Gateway, Tower 1,
25 Canton Road, Tsim Sha Tsui,
Kowloon, Hong Kong

Dear Sir,

**Direct Investigation into the Management of Construction Projects by the Housing Authority and the Housing Department**

Thank for giving us an opportunity to express our views on the supervisory system implemented in Housing Authority/Housing Department (HA/HD) construction sites and the associated manpower issues. We confine our response to the services that the Geotechnical Engineers (GEs) provide in respect of new public housing development or redevelopment projects.

Our services basically comprise four principal areas -

(a) Plan and supervise pre-construction site investigation for development and redevelopment projects.

(b) Design and provide Category I supervision of slopeworks and geotechnical works in accordance with the requirements as stipulated in the Project Administration Handbook published by the Hong Kong Government and PNAP 83.

(c) Appraise foundation options for buildings and ancillary structures before tender stage and provide geotechnical advice in design and construction stages on request.

(d) Advise on the selection of public housing sites and assess geotechnical constraints and development potential of selected sites, including reclamation settlement.

We share with the Civil Engineering Section a team of site staff to support us in supervising pre-construction site investigation works under Item (a).

However the staffing level is inadequate to meet the 100% full-time supervision as promulgated recently by PNAP 132.

We rely all on the respective Contract Managers' site staff and their competency to support our services under Item (b) and (c) in order to control and assure the quality of works as we do not have our own site staff for these works. This is an issue of our concern.

In addition, as a result of the recent quality reform, we have to enhance our services, particularly in respect of Items (a) and (c). The HA/HD have committed to more comprehensive site investigation for public housing projects and greater involvement of the GEs in verifying ground conditions during foundation construction.

To make up the deficiencies in our strength to meet the increasing expectations and production peak, the GE Section has relied on outsourcing. It has engaged two term geotechnical consultants primarily for dealing with the huge slope maintenance programme. And this has provided an avenue for seeking seconded GEs and site staff from the consultants. However this arrangement is not without problems. Subject to their prevailing work load, the consultants might not be able to second staff at the right level who possess suitable experience for the assigned tasks. Besides, the continuity of the services of seconded staff could not be guaranteed as it is affected by the resources planning and staff deployment of the consultants.

We acknowledge there is a rising expectation after the spate of short pile incidents, both within the HA/HD and from the public, to increase the level of GE services. We also acknowledge that the current situation and the way to address issues can be improved. We earnestly request that in improving the current system, a careful balance between roles and responsibilities, authorities and accountability, resources and degree of involvement has to be maintained.

Yours sincerely

**Summary of Responses** to the QHI
(As at end of June 2001)

| Recommendations | Summary of Responses |
|---|---|
| **Pillar One – Providing Quality Services and Products to Customers** | |
| To provide a 10 year structural guarantee to all HOS and PSPS (Rec.21) | Public<br>The public is supportive to the initiative, as it would provide further assurance to the quality of construction.<br><br>Professional Bodies<br>Some practitioners have opined that the scope and applicability of the structural safety guarantee should be clearly defined to avoid disputes<br><br>The Hong Kong Construction Association (HKCA)<br>The HKCA has offered no objection, but some members have expressed concern about the difficulty in resolving interfacing problems given the separate arrangement for piling works<br><br>Housing Department (HD) Staff<br>Front-line staff are concerned about the difficulty in adjudging the HA's responsibility for defects referred by owners under the guarantee and the potential staffing implication. The Department will monitor the workload and re-deploy resources flexibly to enable staff to cope with the referrals effectively. |
| To establish intake hotline and customer services teams in new Home Ownership Courts (Rec.41) | Public<br>The public support the initiative as it would provide quality services to the customers.<br><br>The Hong Kong Construction Association (HKCA)<br>The HKCA has no objection to the establishment of the Customer Service Team provided that the additional requirements are dealt with according to contract provisions.<br><br>Housing Department (HD) Staff<br>Departmental staff are concerned about the shortage of manpower to deliver the enhanced defect rectification services. Their concerns have largely been addressed with the provision of the additional staff resources. |

| Recommendations | Summary of Responses |
|---|---|
| To extend the defects liability period (DLP) to 2 years and adjust the release of retention money (Rec.20) | <u>HKCA</u><br>The Association offers no objection<br><br><u>Electrical & Mechanical Contractors Association (EMCA)</u><br>EMCA has expressed concern about the extension of DLP as the warranty period for E&M equipment is usually 12 months. EMCA however understands that the intention of extending the DLP to 2 years is to better safeguard the interests of the residents against defects which may surface after a full seasonal cycle. |
| To outsource final inspection of flats to ensure consistency of handover standard during peak production (Rec.40) | <u>HKCA</u><br>The Association offers no objection as long as a consistent handover standard is maintained.<br><br><u>HD Staff</u><br>Staff welcome the measure as it will alleviate the resource problem and relieve the staff for the more critical inspection work |
| **Pillar Two – Revamping the Piling Process** | |
| To introduce short-term measures for safeguarding the quality of piling works (Rec.37)<br><br>– Revamping piling process.<br><br>– tightening up the control on sub-contracting activities. | <u>Public</u><br>Outline information of the reform packages has been made known to the public through the media. In general, there is public support to the reform measures in revamping HA's piling process and control of subcontracting activities in piling woks.<br><br><u>Professional bodies</u><br>The engineering professional bodies generally welcome the reform measures, as they would strengthen the professional's role and input in the design and supervision of piling works. Nevertheless, these bodies urged for improvement in the provision of site supervisory staff for piling works under the existing consultancy arrangement. The Project Managers are addressing their concerns on project basis. |

| Recommendations | Summary of Responses |
|---|---|
| To introduce short-term measures for safeguarding the quality of piling works (Rec.37) (Cont'd)<br><br>– Revamping piling process.<br><br>– tightening up the control on sub-contracting activities. | <u>HKCA</u><br>While supporting most of our reform measures, HKCA has reservation on the bid-rigging declaration statement as amended by ICAC. We are still actively resolving the matter.<br><br><u>HD Staff</u><br>Staff are concerned about the additional workload generated by the implementation. At the start-up phase, system development staff are required to incorporate the reform measures into our practices to enable implementation by project teams. At the implementation phase, some new practices demand additional input from project teams, such as ICU submissions and engineer's design. To address the site staff's concern regarding the proposed change in performance appraisal on their performance, we have been discussing with the concerned staff associations with a view to resolving their reservation to the change. |
| To improve the quality of piling works in the long run (Rec.38)<br>– establishment of HA's own list of piling contractors | <u>HKCA</u><br>The HKCA has been fully consulted and their inputs have been incorporated into the draft Rules for Administration of the new List.<br><br><u>ICAC</u><br>Comment form ICAC has been sought and they have raised no objection. |
| **Pillar Three – Reinforcing Site Supervision** | |
| To reimburse the consultants site supervision cost for providing extra staff for quality supervision (Rec. 42) | <u>Consultants</u><br>They welcome the arrangement of allowing them to recruiting Resident Site Staff as their direct employees with the reimbursable site supervision costs. |
| To deploy and maintain sufficient and competent supervisory staff by the HD, consultants and contractors on all sites during project implementation. (Rec.17) | <u>Public, HKCA and HD Staff</u><br>All the parties overwhelmingly opined that reinforcing site supervision is one of the most important elements in assuring product quality. |
| To deploy resident professionals to piling and large scale building projects (Rec. 16) | <u>Public, HKCA and HD Staff</u><br>All the parties support the deployment of resident professionals to site as it would strengthen the leadership of site supervisory team and speed up the decision making on site. |

| Recommendations | Summary of Responses |
|---|---|
| To streamline on-handover inspection procedures and define clear acceptance authority during project completion with a view to providing clear and consistent project handover standards to contractors (Rec.19) | <u>HKCA</u><br>HKCA welcome the establishment of benchmark sample flat giving a clear indication of the acceptance standards for them to follow. Clarification of roles of various client parties at completion stage and streamlining administration procedures could reduce unnecessary rounds of inspections.<br><br><u>HD Staff</u><br>HD staff are generally in support of the streamlining of the handover inspection procedures as it would improve efficiency and make better use of staff resources. |
| To provide induction training to in-house and consultant site staff to reinforce site supervision (Rec.43) | <u>Consultants</u><br>Project consultants welcome the provisions of training to their inexperienced site staff.<br><br><u>HD Staff</u><br>HD staff are generally in support of the training programme. They have concerns about the shortage of manpower to deliver the training services especially in times of peak production. Their concerns have been addressed with the provision of additional staff resources. |
| **Pillar Four – Reforming Listing and Tendering Practices** | |
| To secure competent contractors from the tendering system (Rec.11)<br><br>- Establishment of the Premier League | <u>Public</u><br>The public is increasingly conscious about the quality of public housing and expectation amounts. It is envisaged that the 'Premier League' is the first step in the positive direction in enhancing quality standards and to convey our commitments towards upholding quality to the industry and the public.<br><br><u>HKCA</u><br>HKCA support the idea to reward the good performers. However, their members have divided views on the 'Premier League' requirements. Some of them feel that there is room to enhance its attractiveness by providing greater inducement to the Premier Contractors. On the other hand, some of the others concern about whether their tendering opportunities will be eroded significantly by the introduction of the 'Premier League'. The Department has taken their comments into account when refining the details. The Department considers that the 'Premier League' will encourage contractors' continuous improvement through an open and fair approach.<br><br><u>HD Staff</u><br>The HD staff are supportive of the establishment of the 'Premier League' as one of the Quality Housing Initiatives for better quality. They see it as a pilot move for improving quality standards and for developing more effective contract administration. |

| Recommendations | Summary of Responses |
|---|---|
| To secure competent consultants from the tendering system (Rec.12)<br><br>- Enhanced two Envelope System | <u>Professional Bodies and Trade Associations</u><br>They are supportive of putting heavier weight on technical competence and the normalizing effect on fee bidding. On the other hand, there are still requests on pursuing a baseline fee level. The practicality of which is being jointly examined by HD and the related professional bodies/trade associations. |
| - Open Architectural Competition | <u>The Industry</u><br>There is overwhelming support from the industry. Over 60 submissions were received. Stakeholders form the academic and professional fields were wholeheartedly involved in the creative thinking process for new housing standard in the new era.<br><br><u>HD Staff</u><br>HD Staff treasures the opportunities to articulate their design talent. They benefited from the chance for being the pioneers in working through the site specific design process. |
| To put PASS 2000 on trial for evaluation its effectiveness (Rec.44) | <u>HKCA</u><br>The Association supports the review of PASS 2000 before the new system is rolled out.<br><br><u>HD Staff</u><br>HD staff generally supports the arrangement of deploying the independent team under PASS Unit to take up two-thirds of the PASS Output Assessment (with effect from July 2000) so as to relieve the workload of the project teams. |
| **Pillar Five – Reinforcing Partnering Culture** | |
| To reinforce the partnering spirit with contractors and consultants during project implementation through setting up partnering meetings and review workshops by the HD project teams (Rec.5) | <u>Professional Bodies</u><br>The professional bodies welcome the initiatives of introducing partnering as one that will be inducing teambuilding and co-operation in the industry.<br><br><u>HKCA</u><br>HKCA is in support on the development of partnering frameworks. |

| Recommendations | Summary of Responses |
|---|---|
| To reinforce the partnering spirit with contractors and consultants during project implementation through setting up partnering meetings and review workshops by the HD project teams (Rec.5) (Cont'd) | HD Staff<br>HD staff are conscious of the additional workload implication due to the imposition of partnering at the intermediate stage of the projects. To address their concern, we have carefully selected some pilot projects in different project sections in order to nourish a win-win situation before full launching.<br><br>ICAC<br>ICAC has offered no objection to the drive for implanting mutual trust amongst stakeholders of the Industry as far as the situation is not abused to prompt other corruption opportunities without upholding integrity of stakeholders. ICAC has participated to deliver integrity message at the pilot partnering workshops since May 2000. |
| To extend the construction periods for piling and building contracts by 1 and 2 months respectively (Rec.32) | HKCA<br>The Association supports the extension of the construction periods as it would allow sufficient time for delivering quality products. |
| To revise contractual arrangements for achieving more equitable risk-sharing (Rec. 3) | Public<br>The public support the reform.<br><br>HKCA<br>The Association agrees that the proposals are workable solutions to achieve a more balanced contracting arrangement to facilitate the delivery of quality product.<br><br>Construction industry<br>Some practitioners propose the use of re-measurement contract for contractor's design of piling. In view of the practical difficulties in achieving equity in tendering and control over the ordering of additional works, it is decided not to concede to such request. Some practitioners propose the contractual entitlement of prolongation cost due to unanticipated complex ground conditions in case of contractor's design of piling works, in addition to extension of time. To share risk in an equitable manner, it is decided not to make prolongation cost a contractual entitlement. |
| To establish 'Site Works Forum' for quick resolution of site problems. (Rec.45) | HKCA<br>So far, out of the 120 items raised for discussion under 4 sessions of forum, over 80 items has already been settled. Very positive feedback has been received from HKCA on the quick resolution received from the 'Site Works Forum.' Taking into consideration the support from the industry, the Department will continue to hold such forum on a need basis. |

| Recommendations | Summary of Responses |
|---|---|
| **Pillar Seven – Reinforcing Partnering Culture** | |
| To resolve disputes speedily during project implementation through the use of adjudication and/or Dispute Resolution Advisers in large-scale building contracts. (Rec.6) | Professional Bodies<br>Members from the HKIA, the HKIE, and the HKIS have been consulted and they generally welcome the proposals as ones that will improve on the conventional mode of dispute resolution in terms of pro-activity and enhance the readiness of parties to compromise. They expect that more of their experienced members will be interested in pursuing the DRA listing status.<br><br>HKCA<br>The HKCA strongly supports the proposal in the light of the following advantages that it sees on ArchSD's projects:-<br>(a) expedite the agreement of major variations;<br>(b) avoid undue development of disputes which may lead to expensive and prolonged arbitration or litigation; and<br>(c) Facilitate settlement of final account within a reasonable time after the Period of Final Measurement.<br><br>HD Staff<br>In-house staff support the DRA initiative. Nonetheless, some professional staff are concerned about the pressure imposed on them and in particular the 28 days limit to resolve disputes at the site representatives level. We would need to suitably adjust the workload of staff involved in the pilot projects to enable them to cope with the commitment in a reasonable, satisfactory and effective manner. |

| Recommendations | Summary of Responses |
|---|---|
| **Pillar Nine – Reinforcing Third Party Control** | |
| To introduce an objective third party scrutiny on HA's building by putting them under the control of the Buildings Ordinance (Rec.18)<br>- Establishment of Independent Checking Unit and the introduction of other interim measures | <u>Public</u><br>It is expected that the third party scrutiny on HA's buildings will be well received by the public.<br><br><u>Professional Bodies</u><br>The professional bodies including HKIA and HKIE welcome the equivalent practice as designated AP/RSE. The professional bodies see the value of progressively aligning regulatory control under a unified system.<br><br><u>HKCA</u><br>HKCA has offered no objection to the interim measures to strengthen regulatory compliance. Some HKCA members raise concern about the potential programming and contractual implications, especially for piling works that are designed and built by contractors.<br><br><u>HD Staff</u><br>HD staff welcome the establishment of the ICU. However, the longer term arrangement on the application of AP/RSE may induce major anxiety over criminal liability and security of employment. Full staff consultation will be made before initiating changes.<br><br><u>Government</u><br>The Government sees the need to first address problems of implementation, such as staff resistance, and staff unfamiliarity with the application of the BO and Buildings Regulations. |
| **Pillar Ten – Uplifting Professionalism** | |
| To increase the proportion of trade-tested workers from 35% to 60% in 3 years through contract requirements (Rec 26) | <u>Public</u><br>With the rising expectation on a higher level of workmanship in building construction, it is expected that the public will welcome the proposal to raise the skill level of the construction workers.<br><br><u>HKCA & Workers Union</u><br>Both parties are in support the proposal to raise the percentage of trade tested workers. |

| Recommendations | Summary of Responses |
|---|---|
| **Pillar Eleven – Improving Productivity** | |
| To facilitate the development of an integrated production process (Rec.30)<br>- Wider use of site specific design<br>- Open design competition<br>- Launch a pilot "design and build" project | <u>Public</u><br>It is expected that the migration from standard design to site specific design will be well received by the public.<br><br><u>Professional Bodies</u><br>The professional bodies welcome the proposals as site specific design would bring improvements to our built environment. They see the value of a more diversified stock of public housing in improving our townscape, architecture and livability.<br><br><u>HKCA</u><br>HKCA has offered no objection to a more diverse housing stock. Some HKCA members have concerns about the pace of migration as their investment in system formwork or mechanized construction for the current standard block prototype may not be repaid.<br><br><u>HD Staff</u><br>HD staff are worried about the additional workload arising from the site specific design. For this reason, we have carefully determined the pace and choice of pilot project to contain the resources. Parallel to this, we will strengthen the project management function to step up consultant management, to manage special projects such as design and build. |
| To establish a systematic mechanism to steer the overall research strategy and oversee the use of HA Research Fund (Rec 50) | <u>Public</u><br>It is expected that the public will welcome this initiative as a pro-active and positive move to enhance the quality of public housing, and that the HA would also be seen as a progressive organization taking a leading role in the construction industry.<br><br><u>Professional bodies, academic institutes, trade associations</u><br>All these parties express their support to the setting up of the HA Research Fund. Some have also expressed strong interest in joining the research select committee or undertaking research studies. |

**Recommendations made by Consultant on**
**Review of the Production Process of**
**Housing Authority Development**

| | |
|---|---|
| **(I)** | **STRATEGY OF HOUSING AUTHORITY** |
| 1. | The Housing Authority articulate and communicate a clear development strategy for the coming years. This will be the basis for the re-organisation of the Housing Department Development & Construction Branch. |
| **(II)** | **THE CLIENT** |
| 2. | Review and improve the HA and HD client decision making committee structures to provide clear delegation of responsibility and authority in a manner in which the project teams are able to implement the projects efficiently and with accountability. |
| **(III)** | **PROJECT MANAGEMENT** |
| 3. | Consider the adoption of the re-organisation proposal in Appendix 1. |
| 4. | Implement a full project management system, with appropriate delegated authority to the project managers, on consultants projects as soon as possible. |
| **(IV)** | **IN-HOUSE PROFESSIONAL SERVICES** |
| 5. | Study in detail the application of a full project management system, on a similar basis to that used for external consultants, to in-house designed projects including consultation with the professional staff. |
| **(V)** | **SITE SUPERVISION** |
| 6. | The Contracts Managers should be made responsible for the selection and appointment of site supervision staff, with appropriate experience in each discipline, on their respective projects. This should be done as a matter of urgent priority on foundation, civil engineering and structural works. |
| **(VI)** | **SHORT TEM RISK MANAGEMENT** |
| 7. | Adopt a risk management approach to the allocation and deployment of resources to the design and supervision of works with the aim of reducing risk to a tolerable level and avoiding a repetition of the major failure experienced recently. |
| **(VII)** | **QUALITY MANAGEMENT SYSTEM** |
| 8. | Adopt a quality management system aligned with the strategy and organisational structure of HA/HD in a more simplified and more flexible format than the current QMS. The new system should allow professional staff with appropriate delegated powers to apply their professional judgement to the matters delegated to them. |

| | |
|---|---|
| **(VIII)** | **PROCUREMENT SYSTEMS FOR PROFESSIONAL CONSULTANTS** |
| 9. | In consultation with the relevant professional bodies and trade associations, develop consultant procurement systems that are less influenced by lowest price, lead to a partnership approach and satisfy public accountability concerns. |
| **(IX)** | **PROCUREMENT SYSTEMS FOR CONTRACTORS** |
| 10. | In consultation with the construction industry trade associations, develop construction procurement systems that are less influenced by lowest price, lead to a partnership approach and satisfy public accountability concerns. |
| **(X)** | **PROCUREMENT SYSTEMS FOR MATERIALS AND COMPONENTS** |
| 11. | Adopt the private sector approach of allowing substitutions to the approved products on a project by project basis with the decisions on substitution being taken by the Contract Managers in consultation with the client. |
| **(XI)** | **PASS** |
| 12. | Review the performance of PASS 2000 after its trial period and consider the application of a simple system that relies more on professional judgement with an appropriate appeal mechanism. |
| **(XII)** | **COMPLIANCE** |
| 13. | Establish immediately an independent compliance system for all HA projects capable of operating to the same standards as the Building Authority. |
| **(XIII)** | **BUILDING COST CONTROL** |
| 14. | As part of enhanced project management establish a budget and cost control system that includes value management and value engineering and seeks to achieve optimum value for money in HA projects. |
| **(XIV)** | **PROJECT MANAGEMENT SYSTEM AND INFORMATION TECHNOLOGY** |
| 15. | Once the re-organisation strategy is agreed, the D&C Branch should establish an IT Steering Committee, with representatives from the younger, more computer literate staff, to establish and implement a strategy for the development of IT applications to support the activities of the Branch. |
| **(XV)** | **ACCOUNTABILITY** |
| 16. | Undertake a review of the delegation of responsibility and authority within a D&C Branch with a view to increasing accountability at all levels. |

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| **(XVI)** | **EFFICIENCY** |
| 17. | Establish a staff cost monitoring system allocates staff costs to individual activities and projects so that efficiency can be measured and benchmarked against the private sector. |
| **(XVII)** | **AUDIT** |
| 18. | Develop an audit system which focuses on the product rather than the process including using international consultants to achieve best practice. |
| **(XVIII)** | **SITE INSPECTIONS BY DIRECTORS AND ASSISTANT DIRECTORS** |
| 19. | Undertake regular site inspections by HD directors and HA members to demonstrate leadership on the issued of quality. |
| **(XIX)** | **DIRECT APPOINTMENT OF CONSULTANTS** |
| 20. | Consultants for future projects to be selected and appointed separately by HA, but co-ordinated by the Architect and managed by the project managers. |
| **(XX)** | **RESEARCH & DEVELOPMENT** |
| 21. | Establish a Research & Development team dedicated to finding ways to improving the quality of public housing design and construction to international best practice standards. |
| **(XXI)** | **STANDARD DESIGN** |
| 22. | Undertake value management and value engineering exercise on the current standard block designs with input from external consultants with relevant international expertise in high rise public housing design and construction. |
| **(XXII)** | **STAFF CONCERNS** |
| 23. | The Directorate should develop a much closer working relationship with the professional staff and build an internal partnership based on trust in their professional judgement. This internal partnership arrangement can form the basis of creating an efficient motivated organisation in HD that is capable of achieving the strategic objectives of HA. |
| **(XXIII)** | **MANAGEMENT OF CHANGE** |
| 24. | The Directorate establish a change management strategy for HD including identifying and empowering the individuals to lead the process of change. |

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| **(XXIV)** | **STAFF MANAGEMENT ISSUES** |
| 25. | Establish a staff management system aligned with the future strategies of HA and the organisation structure of HD. |
| **(XXV)** | **QUALITY** |
| 26. | HA and HD consider the quality of public housing in the broadest perspective and establish benchmarks for the future which reflect Hong Kong's aspiration to be a world class city. |

Appendix 1

## Proposed Restructuring of Development and Construction Branch

As presently structured within the Housing Department, the Development & Construction Branch is fulfilling four distinct roles in the development process.

**Central Services**

This covers all the non-project specific professional, technical and administrative services required to operate the Branch.

**Project Management**

This is the application of project management as distinct from professional services to the individual projects.

**Professional Services**

This is the provision of professional services in the disciplines of Planning, Architecture, Structural Engineering, Civil Engineering, Geotechnical Engineering, Building Services Engineering, Landscape Design and Quantity Surveying which currently exist within the Department.

**Compliance**

This is the independent monitoring system normally provided by the Building Authority in the case of private sector development.

In the current division of responsibilities, as set out in the Quality Management System manual, there is a lack of clarity in the execution of these roles and individual units are often acting in overlapping capacities.

A clearer definition of roles could be achieved by regrouping the existing units along the following lines. A review of the terms of reference of each unit will have to be undertaken and units should be combined if possible to streamline the overall organisational structure. The goal is to provide each of the elements with very clear responsibilities and authority, well-defined interfaces and clear, accountable reporting systems.

This model, in broad terms, is common in the private sector even, in some cases to the extent of developers having in-house professional services for a portion of the projects. The mix of in-house and external professional services procured on a similar basis allows for efficient resource allocation and comparison of performance.

1. **Central Services Division**

Special Duties
Branch Administration Secretariat
Finance Unit
Design & Standards Section
Standard Block Design Team
Specifications & Components Team
Technical Secretary Unit
PASS Control Unit
Quality Management Unit
Information Systems Management Unit
Materials Testing Laboratory 1
Materials Testing Management Unit

The Central Services Division would, in response to the strategic direction set by the Housing Authority, be responsible for developing the standards of design, materials and components to be adopted by the Project Management Division and the Professional Services Division. One of its key roles would be the research and development of new building technologies that could enhance the quality of public housing developments with professional support from the Professional Services Division, this is effectively the "Legco" element.

2. **Project Management Division**

Project Management Unit
Project Management Section 1
Project Management Section 2
Project Management Section 3
Project management Section 4

The multi-disciplinary project management teams should take full responsibility for the management and control of the development projects, taking direction from, and reporting to the relevant client committees. The scope of services to be provided by the project management teams on each project would be defined using standard terms of service as the basis. The resourcing of Project Management teams to provide the enhanced levels of services would have to be increased from current levels. The additional PM staff would be selected from the professional and technical grades and would require project management training. Professional services would be procured internally or externally on a similar basis using similar standard forms of agreement. Supported by Professional Services Division and/or external professional consultants this is the "Exco" element.

## 3. Professional Services Division

Planning Section

Architecture
- Architectural Section 1
- Architectural Section 2
- Architectural Section 3

Structural Engineering
- Structural Engineering Section 1
- Structural Engineering Section 2

Civil Engineering
- Civil Engineering Section
- Land Surveying Unit

Geotechnical Engineering Section

Building Services Engineering
- Building Services (New Works) Section1
- Building Services (New Works) Section 2

Landscape Design
- Landscape Group (Unit 1)
- Landscape Group (Unit 2)

Quantity Surveying
- Quantity Surveying Section/Construction Services
- Quantity Surveying (Projects Section)

The scope of professional services provided by each of the professional disciplines in the division would be the same as that provided by the equivalent external consultants. The supervision of works on site would be the responsibility of the Professional Services Division and site supervision staff would come under their direct control. The staff should be grouped in single discipline teams managed by the heads of the relevant disciplines. This would allow their efficiency and effectiveness to be compared with external consultants. The head of each discipline would have overall responsibility for the performance of the professional staff within that discipline. In situations where the PM is unhappy with the professional services being provided he would take the matter up with the relevant heads of the disciplines initially and with the D&C Director if he is unable to resolve the problem.

## 4. Compliance Division

Audit Unit
Project Support & Vetting Section

If HA projects continue to be exempted from the provisions of the Buildings Ordinance, it is necessary to have internal compliance procedures to ensure that developments are undertaken in accordance with the approved policies and practices of the Authority. The Compliance Division would provide independent checking and monitoring using both in-house staff and external professional consultants where appropriate. It may be more appropriate for the Compliance Division to reinforce its independence by reporting to someone other than BD/D&C. This is the "Judiciary" element.